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TO: INDIVIDUALS AND AGENCIES

SUBJECT: DRAFT ENVIRONMENTAL IMPACT STATEMENT
MEI LUN YUEN DEVELOPMENT OF THE CHINATOWN
REDEVELOPMENT AREA IN SAN FRANCISCO, CALIFORNIA

Attached is the Draft Environmental Impact Statement for the Mei Lun Yuen Development of the Chinatown Redevelopment area in San Francisco, California, for your review and comment in accordance with Section 102(2)(C) of Public Law 91-190 (U.S. C. Section 4332) and implementing Federal regulations.

We invite you to submit comments on the attached Draft Environmental Impact Statement. Your responses and comments will be considered in the preparation of the Final Environmental Impact Statement. Submission of your comments within forty-five (45) days from the date of this letter would be appreciated so that the Final Statement can more fully reflect your views.

Copies of this Draft Environmental Impact Statement are available for reading by the public at the information centers of the HUD San Francisco Area Office at One Embarcadero Center, San Francisco, the HUD Regional Office at 450 Golden Gate Avenue, San Francisco and the main branch of the San Francisco Public Library Documents Section.

Your comments on this Draft Environmental Impact Statement should be addressed directly to:

Mr. George B. Adams
Environmental Staff, 9.1SE
U. S. Department of Housing and Urban Development
One Embarcadero Center, Suite 1600
San Francisco, California 94111
(415) 556-6642

Sincerely,

James H. Price
Area Director

Enclosure

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HUD-R09-EIS-1976-9D

DRAFT ENVIRONMENTAL IMPACT STATEMENT

MEI LUN YUEN DEVELOPMENT

OF

THE CHINATOWN REDEVELOPMENT AREA

IN

SAN FRANCISCO, CALIFORNIA

Prepared by:

San Francisco Area Office
U. S. Department of Housing and
Urban Development
Environmental Staff
One Embarcadero Center, Suite 1600
San Francisco, California 94111

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Mei Lun Yuen development
of the Chinatown
[1976]

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SUMMARY SHEET

STATUS: (X) Draft ( ) Final

SUBJECT: Mei Lun Yuen Development of the Chinatown Redevelopment Area in San Francisco, California

Name of Responsible Federal Agency:

U. S. Department of Housing and Urban Development
San Francisco Area Office
One Embarcadero Center, Suite 1600
San Francisco, California 94111

1. Name of Action: (X) Administrative ( ) Legislative

2. Brief Description of Action:

Redevelopment of parcel into a highrise elderly apartment house containing 140 units with 10,000 square ft. retail commercial space at ground level: 35 family flats in four buildings; and a five-story commercial parking garage.

3. Summary of Environmental Impacts and Adverse Environmental Effects:

No major adverse impacts. Minor impacts include partial blocking of some views of the Bay, some noise pollution, air pollution and loss of open space.

4. Alternatives Considered:

Market rate housing, commercial/hotel development, open space/park development, alternative locations and site and/or design modification.

5. All Federal, State and Local Agencies from which Comments have been Requested:

See Appendix A

6. Date Statements Made Available to CEQ and Public:

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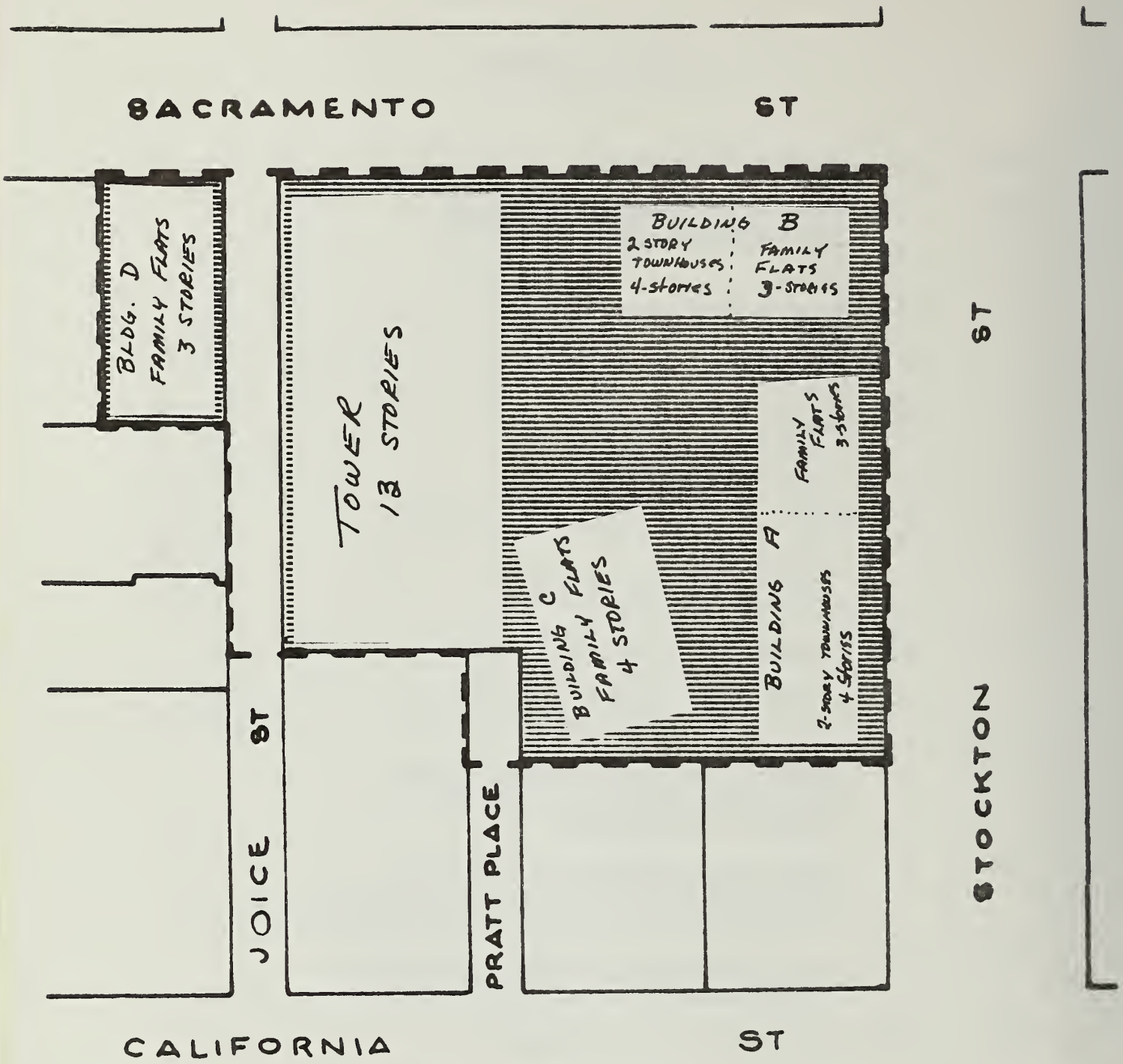


ILLUSTRATIVE BUILDING LOCATIONS

(NOT DRAWN TO SCALE)

PROJECT DESCRIPTION

Mei Lun Yuen is the "Project" and is a proposed residential development with a parking garage and some commercial retail space as ancillary land uses. The Project is to be constructed in the Chinatown Urban Renewal Area which consists of a portion of the block bounded by California, Powell, Sacramento and Stockton Streets in San Francisco, California. (See map opposite). This block is situated between the City's Chinatown Core and Nob Hill areas and near the edge of the Financial District. The Project has the same boundaries as the Chinatown Urban Renewal Area.

The residential portion of the Project will provide 175 living units in five buildings. There will be 140 elderly units (25 efficiency and 115 one-bedroom) in a thirteen-story reinforced concrete building and thirty-five 2,-3, and 4-bedroom family units in four 4-story wood-frame buildings. It will be financed under Section 236 of the National Housing Act (as amended). See Appendix C for an explanation of the Section 236 program.

A five-story commercial garage will first be constructed on the eastern portion of the property. The uppermost ceiling slab of the garage will also serve as a platform upon which three of the family-unit buildings will be constructed. Thus, the three family-unit buildings will be situated on air-rights over the garage. (The air-rights will be owned by the sponsor). This garage will also contain 10,500 square feet of specialty retail commercial space facing onto Stockton Street which is expected to serve the residents of the Project as well as residents of the surrounding neighborhood.

The sponsor of this Project is The Presbyterian Church In Chinatown. The developer is Arcon, Inc. of San Francisco.

There will be two parking areas reserved for exclusive use of the residents in the Project: a) two floors of parking below the tower building and b) a parking area under one of the family-unit buildings which will be located on the 3,280 square-foot parcel situated west of Joice Street behind the residential tower.

In early 1972 when this site was designated an urban renewal area, it contained eleven old residential structures with a total of 47 living units, and a surface parking lot. Seven of these structures were substandard to a degree warranting clearance and the remainder had city code deficiencies.

Since that time, the San Francisco Redevelopment Agency has acquired the real property in the Project area through purchase and eminient domain proceedings. Upon completion of the relocation program under Federal, State and local regulations, the Agency began the process of clearing and preparing the site for sale to the developer. When the process is complete, the Agency will have consolidated all the former lots into one parcel and it will then convey the site, cleared of all structures and trees, to the sponsor. The sponsor. The sponsor (non-profit) will then start Project development. Ownership of the Project will be:

the highrise dwelling structure and a couple of small lots in fee simple to the nonprofit owner; the area beneath the platform to Arcon, Inc., subject to reservation of air rights; the air rights reserved from Arcon will be conveyed from the Agency to the non-profit owner.

PART II

PROBABLE ENVIRONMENTAL IMPACTS

LAND USE

The official Redevelopment Plan for the Stockton/Sacramento Approved Redevelopment Project* was approved by the Board of Supervisors in May, 1974, by Ordinance #250-74. It complies with San Francisco's Master Plan, which shows the Project site to be in the highest density area.

Zoning of the site is C-3G and R-5 (see zoning map opposite following page) as are the areas surrounding the site.

According to the Redevelopment Plan, "The Project shall be redeveloped for multi-use development consisting primarily of low-and moderatepriced private housing for families and elderly residents. Such multi-use development shall also include retail sales, community open space and automobile parking, and may include offices and spaces for public and community services. Approximately 150 to 200 housing units should be developed on the site for households of moderate and low income. There should be a minimum number of large family units, including four and five bedrooms."

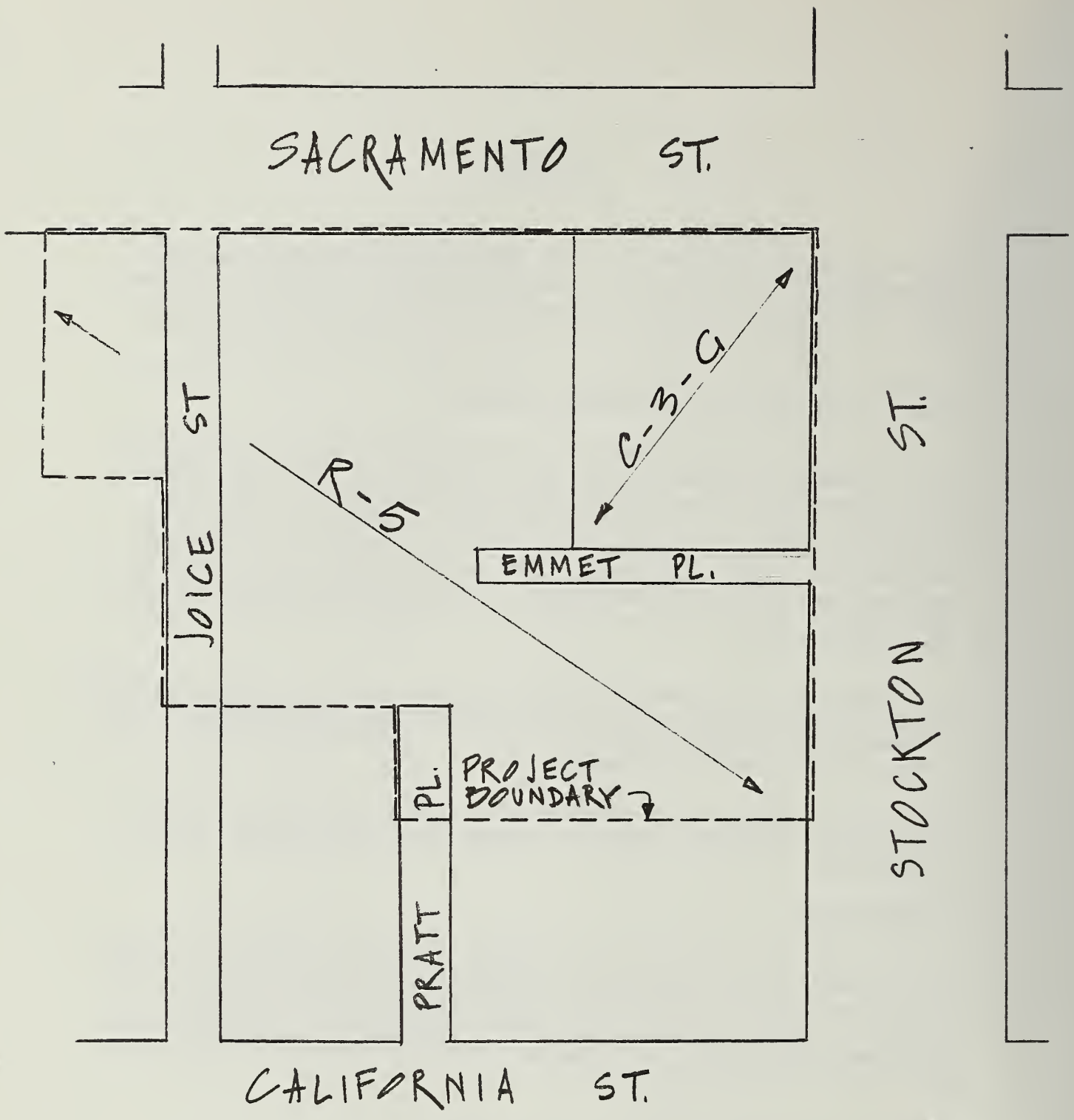
The Project plan proposes 140 elderly housing units in a tower structure, and 35 family dwelling units in 3 and 4-story wood frame buildings over a commercially operated parking garage, and including about 10,000 square feet of commercial space.

These uses comply with the City's Master Plan and the Redevelopment Plan, and are compatible with the existing uses and character of the neighborhood.

Existing Uses:

At this time, the Project site is vacant, having been cleared of several old residential structures that occupied it. The block in which it is located is primarily residential, and contains several apartment houses varying in height from two stories over commercial, to an eleven story structure at the corner of Sacramento and Powell Streets. Several other high rise structures dot the area.

*Original designation used in cited ordinance



MEI LUN YUEN PROJECT
ZONING MAP

The blocks surrounding the Project site are almost entirely built up and consist of mixed uses of commercial, residential, public and quasi public establishments. One block east is Chinatown along Grant Street, with San Francisco's financial center just beyond. And three blocks south, through (or over) the Stockton Street tunnel is Union Square with its well-known stores and hotels that make up the heart of San Francisco's commercial center. Opposite the site, on the north side of Sacramento Street is Donaldina Cameron House, a long-established Presbyterian Church community organization in the area. A block away is St. Mary's Chinese School and the Commodore Stockton Elementary School. To the east of the site is the Chinese Playground and the YMCA, providing recreational opportunities for future residents. Immediately to the west and uphill from the site is the Nob Hill area. Other well-known landmarks in the vicinity are the Fairmont Hotel, YWCA Residence Club and YWCA Clay Street Center.

Impacts:

The long-term impacts of the Project upon the environment (favorable and adverse), and of the environment upon the Project, are as follows:

1. The site has now been cleared, and is vacant, except for a temporary parking lot along Stockton Street. As vacant land, tax revenues to the City are less than what will be realized with the Project completed.

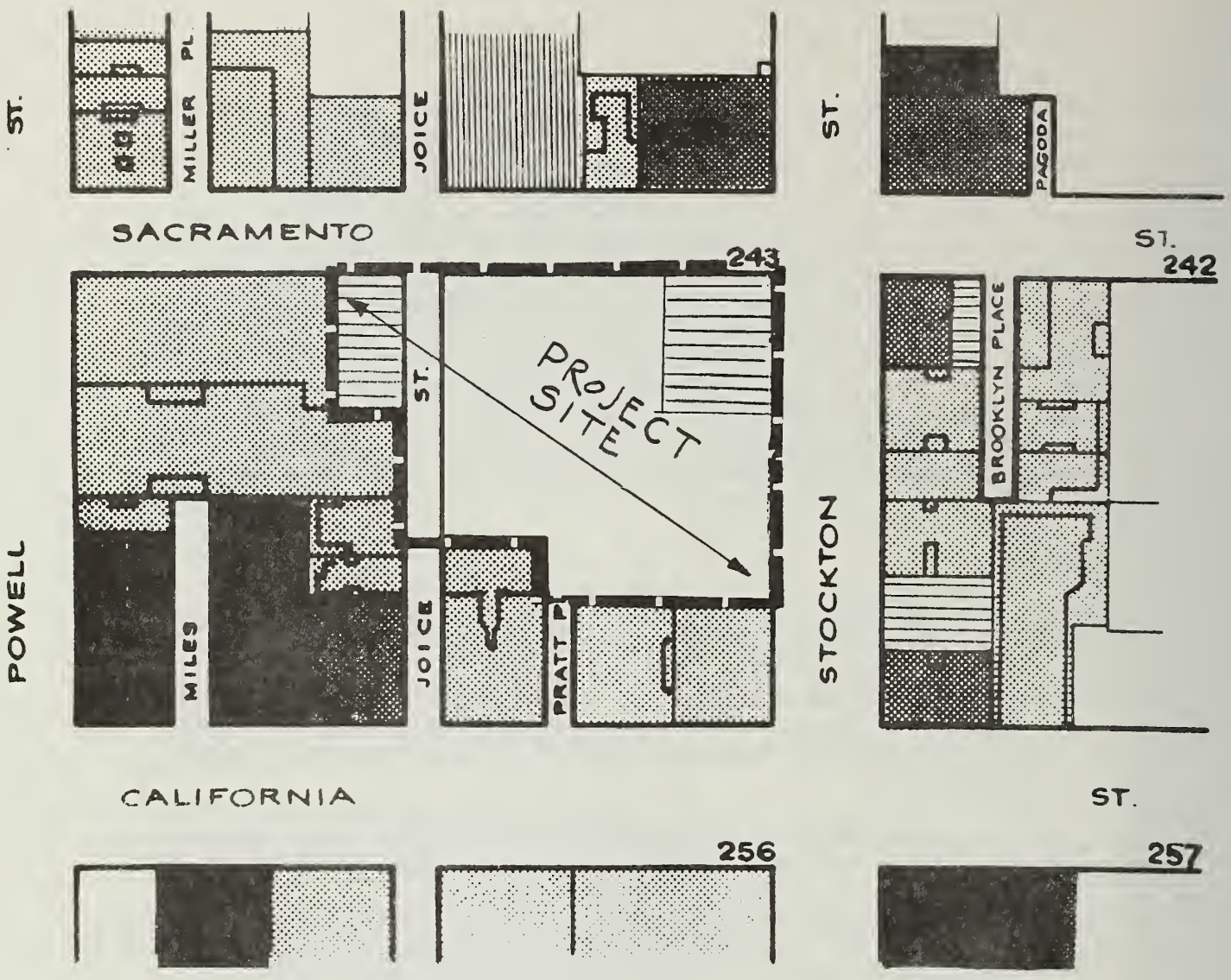
2. As a vacant site, it is relatively unattractive, a condition which will change for the better through construction of the Project.

3. The major impact and benefit will be that housing will be available at moderate prices, thus benefitting those residents needing such housing. The Project is an appropriate use of the site.

4. One adverse impact will be the loss of open space. However, this is considered minimal since this OS is unimproved at this time, and as such is virtually unusable. Construction of the Project will provide a plaza type open space at the Joice Street level, to be attractively landscaped so as to render it both attractive and usable.

5. A beneficial impact of this Project upon the Chinatown area will be the provision of a physical definition of this part of San Francisco. If the architectural treatment is outstanding, then this definition will be the more striking and effective. A poorly designed Project, on the other hand, would result in an ill-defined area, or no definition at all.

6. The environment will have a favorable impact upon the Project because of the relatively large diversity of activities available nearby. Among those are Chinatown, adequate public transportation facilities, and San Francisco's downtown commercial area.



EXISTING LAND USE (GENERALIZED)

N

1" = 100'

- WHOLLY RESIDENTIAL
- PREDOMINANTLY RESIDENTIAL
- PREDOMINANTLY COMMERCIAL
- PARKING LOT
- SEMI-PUBLIC
- PROJECT AREA BOUNDARY

MEI LUN YUEN PROJECT & IMMEDIATE VICINITY

7. Short Term Impacts: The construction of any development involves a certain amount of disruption, noise, dust, trucks, vibration and general inconveniences. These are all of short-term duration, and can be partially mitigated by the application of strick work hours, observance of safety regulations, erection of barricades around trenches or material storage, use of water trucks for dust control during grading operations and use of signs (temporary) to alert the public of possible dangers. All these things are to be required in HUD procedures to minimize this adverse effect during the Project's development.

TRAFFIC AND CIRCULATION

Traffic generation from the Project will be as follows:

1. Residential:

   City of San Francisco parking requirements for the Project are one space for each family unit and 1 for 7 elderly unit. Total required, and provided: 55. These will generate the following traffic, based on figures by City Planning's Transportation Department.

Family units: 6 to 7 daily trips per family	=	210 to 245 trips
Elderly units: 1 to 3 daily trips per unit	=	140 to 420
Total		350 to 665 trips per day

   The spread above is impractical for computation purposes. Therefore, for this analysis, an average, or 508 daily trips will be used, for the residential traffic generation. It is estimated that 35 of these trips will occur during the 5-6 p.m. peak hour, and half, or 254 will be during the 10 a.m. to 6 p.m. 8-hour period.

2. Commercial: 216 spaces are being provided. The city requires, for the 10,500 square feet of commercial store area, 21 parking spaces. These will generate 5 trips per day, or 105 trips. Twenty of these will occur during the peak hour and the entire 105 will be during the 10 to 6 8-hour period.

   The remaining 195 spaces are to be rented out according to the sponsor's architect. City policy is to discourage commuters' use of such facilities, and encourage short term use in an effort to alleviate the severity of the parking shortage in this vicinity. The ratio of long term (all day) versus short term users is not known at this time and won't be until the garage has been in full operation for sometime. Therefore, for the purpose of this analysis, an arbitrary 50-50 proportion will be used. This means that 98 stalls will be for long term users, arriving and leaving during the 7-8 a.m. and 5-6 p.m. rush hours respectively.

The key factor in determining the amount of traffic generated by short term uses of the parking garage is the average time parked. This factor is unknown at this time, but our check with Portsmouth garage revealed that 2 hours is about the average there. Using this figure then would mean 4 turnovers during the 8-hour period of 10 a.m. to 6 p.m., or 4 x 98 = 392 trips for the short term user.

The Project:

Preliminary plans for the Project indicate that the 55 residents' parking spaces will have both egress and ingress off Sacramento Street, as will the commercial spaces (from a second driveway), except that the latter will also have an ingress (but no egress) off Upper Stockton Street. The Architects have estimated, on a preliminary basis, that perhaps 50% of the "in" space vehicles will use Upper Stockton Street, and the other 50% Sacramento Street. The actual proportion is indeterminate at this time, and though important, is not as important as the fact that all cars will have to exit onto Sacramento Street, thereby adding traffic as discussed below.

Sacramento Street: This is a narrow street, 29 feet wide curb to curb. Parking is allowed along both sides and subject to towaway zones during 4-6 p.m. rush hour. During the day hours, there is but one effective lane of traffic, and during rush hours, there are three. Number 55 bus, (third busiest in San Francisco) runs westerly on this street (the street is one-way, westerly). These buses, together with existing driveways, a stop sign but no signalized intersection with Powell Street, and the steepness of the street (18% upgrade) are factors which limit the street's capacity to about 600 per hour, according to the Redevelopment Agency's 1974 EIR on this project, and verified by the City's Transportation Department.

Current traffic on this street averages approximately 4500 daily. On an hourly basis, traffic increases gradually from 106 vehicles/hr. at 8 a.m. to 561 at 6 p.m., and then drops off rapidly to less than 100 after midnight. The morning and evening peak hours vary greatly from 145 vehicles between 8 and 9 a.m., and 561 between 5 and 6 p.m.

The peak hour traffic is the most meaningful in analyzing this street's ability to handle the additional traffic because dispersion throughout the rest of the day is such that the current traffic plus Project-generated traffic would always be substantially below the street's capacity to handle except during the second highest hour, which is 4 to 5 p.m. when the existing traffic is 519 vehicles. During both of these hours therefore, an excess over-capacity would be experienced, as shown on the following table:

Peak Hour Calculations:

Existing hour volume (4 to 5 p.m.)		519 vehicles
Project's Traffic:		
Residential	40 vehicles	
Commercial Area*	20	
Short Term Parkers	49	
Long Term Parkers	0	109
		628 vehicles
Existing peak hour volume (5 to 6 p.m.)		561 vehicles
Project's Traffic:		
Residential	75 vehicles	
Commercial Area*	20	
Short Term Parkers	49	
Long Term Parkers	98	242
		803 vehicles

* The short term parkers and the Commercial area figures both reflect short term use of the facility. They are separated here merely because, according to San Francisco Transportation Department, the traffic generation is 5 trips per parking apace for commercial development. Hence, 21 spaces x 5 = 105 daily trips, 20 of which will occur during the peak hour.

The worse condition is obviously during the 5-6 p.m. hour when 203 vehicles more than the 600 capacity that this street possesses will use it. While this normally would not be a very significant excess for many streets, this particular block of Sacramento Street is such that some mitigating measures should be considered. This is because the street's capacity is relatively low, as previously discussed.

California Street:

This is a major street in San Francisco. It is 51' wide curb to curb, parking is allowed on both sides, with a towaway zone along its north side. Two cable-car lines in the middle of the street leave one lane of traffic in each direction. Private driveways with curb cuts are found along both sides of the street. The Redevelopment Agency has estimated its capacity to be 1000 vehicles in each direction, or 2000 total. This is well over the actual peak hour volumes of 1520 vehicles (665 eastbound, and 855 westbound) total. It therefore has excess peak hour capacity to the extent of nearly 500 vehicles.

Powell Street:

This is another major street in San Francisco, with the same characteristics as described above for California Street. No figures are available regarding its peak hour volumes, but our field observations indicate less traffic than on California Street, resulting also in an excess capacity situation of 500 or more vehicles during peak hours.

This street plays a major role in the Project's analysis because all Sacramento Street traffic must use it after observing the stop sign on Sacramento Street at Powell. All this traffic has three choices of direction--right turn toward Fisherman's Wharf, left turn toward Union Square, or across to continue on Sacramento, a one-way street westerly to Gough Street. The proportion of this split is unavailable from the City's Traffic Engineering Department, but our field observations indicate that most of the traffic turns on Powell Street. Since the Sacramento peak hour traffic has been calculated at 803, and Powell Street excess capacity is m ore than 500 vehicles, about 2/3 of the Sacramento Street traffic could turn on Powell Street and still be within the capacity limitations, and therefore not create an adverse impact upon this street.

Joice Street:

This is a narrow alley way, approximately 12' curb to curb in width, and carries an insignificant amount of traffic, not affecting the Project except for access by emergency vehicles.

Stockton Street (Lower):

The Project will not affect this street because no access/egress will be allowed from it. The street is 47' wide, curb to curb through the tunnel, and is divided in 3 lanes (2 northbound, and 1 southbound). No parking is allowed in the tunnel, but is allowed on both sides north of Sacramento Street. All Project-related traffic as well as all Sacramento Street traffic must come either from Stockton Street or from Sacramento Street east of Stockton. But because of Sacramento's one way pattern away from Stockton Street, none of the project's generated traffic will affect it.

Stockton Street (Upper):

This street is only 1/2 block long north of California Street, and presently serves primarily as a parking area to residents of abutting apartment houses. The planned Project entrance off it will increase the traffic by the expected number of users, which has been estimated at some 50% of the "in" vehicles. This would result in about 84 vehicles during peak hour (half of the non-residential Project-related traffic). This would be a worst condition, occurring during the 5 to 6 p.m. peak hour, and would be considered a minor adverse impact requiring no mitigation.

Public Transportation:

Two bus lines (#30 on Stockton Street, and #55 on Sacramento Street), plus the cable cars on California and Powell Streets serve this area, thus providing public access to BART and virtually all parts of the City and beyond. According to the Director of Transportation for the Municipal Railway System, these existing facilities are able to serve an additional 10,000 patrons per day. The project will therefore have an insignificant impact on the public transportation system.

Impacts and Mitigation:

A. Long Term Impacts

1. Driveway location on Sacramento and Upper Stockton Streets will cause the permanent loss of approximately 8 parking spaces. Since the entire general area is in dire need of additional, rather than less parking, this impact is both adverse and of long term.

   Mitigation: The Project will provide 55 on-site parking spaces for its residents and 216 commercial parking spaces. This will far offset the loss of eight spaces.

2. The peak hour Project-generated traffic will cause Sacramento Street traffic volume to exceed its capacity by some 200 vehicles between 5 and 6 p.m. Although this adverse impact is likely to occur only at this time, it could result in a back up of traffic on Sacramento and Stockton Streets. This condition should not be allowed to happen, and three possible mitigating measures may be considered:

   a. Reduce the garage's capacity and thereby the number of automobiles in the area. This in turn would result in a reduction of parking spaces where they are greatly needed.

   b. Establish a rate structure that will discourage the use of the garage by long term parkers, thereby eliminating almost 100 vehicles during the rush hour. This would be in compliance with City policy.

c. Redesign garage ramps as needed to direct exiting traffic to Upper Stockton Street where only an entrance is planned according to the project plans. This entrance would require widening to accommodate two-way traffic, and an additional collection booth to collect fees. Traffic exiting from this point would all have to use California Street, but, since its capacity currently exceeds its volume, no problem would result. An obvious advantage of this possible mitigation is that the garage management could effectively control and adjust traffic movement in accordance with street traffic conditions.

It is recognized that the last of these possible measures would involve some fairly substantial changes in the project's design, and would not result in sufficient benefit to justify it since street capacity figures (although valuable for planning purposes) cannot be taken as inviolate in practice. The discouragement of long term parkers appears to be the more practical approach since it would reduce the peak hour traffic by about 100 vehicles, leaving an "over-capacity" of only about 100 vehicles during peak hour. We would consider this a fairly minimal impact and insufficient to justify stronger mitigating measures.

BIOTA

Present Environment

The 42,914 square foot site is land prepared for development and is characterized by a fairly steep grade of approximately 18%, rising from its base along Stockton Street up Sacramento to its termination forty feet or so above Joice Street.

The area surrounding the site is highly urbanized. An intensive walk back and forth across the site approximately 25 to 30 feet apart did not reveal any wildlife and only a bare minimum of plant life was noticed since the site has been graded and prepared for development. HUD contacted the staff of the Endangered Species Coordinator in the Regional Office of the California State Fish and Wildlife Service. They indicated that there were no known or suspected rate or endangered species of wildlife in or near the area of the proposed Project.

The weather is typical San Francisco moderate. The average annual mean temperature in 1975 was 55.8 degrees F. Frequent fog and westerly winds tend to keep the climate temperate.

Vegetation

Preliminary development plans of Omi Lang Associates, landscape architects, call for a total of 22,742 square ft. of outdoor landscaping, with 19,451 square ft. of this being open landscaping and 3,350 sq. ft. being on the roof garden tower. Thus, the long-term impact on the vegetation of the site should be positive.

Anticipated Impact

No negative impact is anticipated on the biota on this site as a result of this Project. The permanent effect should be positive, since the landscaping planned for the site will provide vegetation which will visually enhance the site while helping to prevent erosion and drainage problems.

EDUCATION

Under current busing policies of the San Francisco Unified School District (SFUSD) which have been established in an effort to achieve maximum integration, school age children from grades four on through high school are apt to be bused to all parts of the City. Thus enrollment figures for grades beyond the fourth in schools near the site have no significance in this analysis. The number of school children emanating from this Project would not necessarily have any effect on the secondary schools in the neighborhood, even if the number of children involved was much greater than it is. Thus the impact on only those schools serving children up to the fourth grade are discussed in this assessment.

It is estimated that the maximum number of school age children three to nine years old who may occupy the 35 family units (based on the number of bedrooms and the age distribution in the five census tracts including and surrounding the site in the 1970 Census of Population) would be 69. This maximum estimate of three to nine year olds assumes that the general age distribution of the population in the area has not changed significantly since 1970.

Existing Facilities

Elementary school age children in grades K-3 attend Commodore Stockton School at 950 Clay Street, one block away from the Project site. School enrollment at the end of February 1976 at Commodore Stockton was 758 children; capacity is 873 students.

There are several nursery schools operated by the SFUSD within a short distance of the Project: one, the Commodore Stockton Nursery and School Age Center at 949 Washington Street (serving children from two years through the third grade) had a June 1976 enrollment of 88 and a total capacity of 100. The Commodore Stockton Annex Nursery at 855 Sacramento Street for two to six year olds, had a June 1976 enrollment of 26 and a capacity of 34. Another, the Commodore Stockton Prekindergarten Center at 954 Washington Street has a capacity of 80 children one year prior to Kindergarten for three-hour sessions, part day.) In addition to these, there are a few private nursery schools, also one operated by the YWCA and two operated by the Economic Opportunity Council.

In general it may be said that all the educational facilities for young children in Chinatown are operating close to capacity.

The Chinese Educational Center operated by the SFUSD, with a capacity of 220 is a receiving center and elementary school for newcomers of all ages to prepare them for entry into a bilingual program or to school assignment. After September 1976 it will be located at 657 Merchant Street.

San Francisco, a highly urbanized and culturally rich city, has a wide range of eeucational resources available to its adult residents interested in continuing and expanding their education.

Conclusion:

Due to the minuscule increase in the school age population which will accrue from this development, no adverse effect on local educational facilities is anticipated.

AIR QUALITY

Existing air quality in the vicinity of the proposed Project is affected primarily by vehicular traffic throughout the surrounding area. The proposed Project will impact the existing air quality in the following ways:

- Vehicular traffic and its resulting exhaust emissions on Sacramento and Stockton Streets will be increased slightly due to project generated traffic;

- Exhaust emissions from the parking garage;

- Natural gas combustion for space heating and heating of hot water; and

- Construction activities.

Each of the above impacts is discussed in detail in the following paragraphs and is added to the existing concentrations of pollutants for comparison against Federal and State air quality standards. Conclusions are drawn and, where necessary, mitigating measures are recommended.

Emissions

Project-Related Vehicular Traffic on Streets

The Circulation/Transportation assessment indicates that the proposed project will generate an additional average daily traffic (ADT) of 1550 vehicles. This additional traffic is primarily along Sacramento and Stockton Streets and is the result of vehicles entering and leaving the parking structure which is a part of the proposed project. (NOTE: There is also an entry to the parking structure on Upper Stockton Street; however, traffic into the parking structure at this point is expected to be relatively small compared to traffic at the Sacramento Street entrances/exits).

Emissions of pollutants due to project-related vehicle miles traveled (VMT) is shown in Table I below as a percentage of all vehicular emissions within the Local Project Impact Area (LPIA). Computation Sheets, data and procedures contained in the Bay Area Air Pollution Control District (BAAPCD) "Guidelines for Air Quality Impact Analysis of Projects, June, 1975" were used for calculation of this air quality impact.

Table I - Emissions from Project Generated Traffic

Item	Total Daily Emissions (g/day)				
	CO	HC	NO_X	SO_X	Particulates
Project Related Traffic	10788	1599	1289	43.2	104.4
Existing traffic within local Project Impact Area(LPIA)	1,808,700	268,049	215,959	7235	17544
Project Impact (% of existing)	0.596	0.596	0.596	0.596	0.596

From the above impact percentages, it can be seen that the additional vehicular traffic generated by the project will have a very small impact on total vehicular emissions in the vicinity of the site.

Emissions Inside the Parking Garage

The project includes a total of 271 parking spaces. Five-levels of parking are provided in a structure under the plaza area. Two of these five levels are at elevations below Stockton Street. An additional two levels of parking are provided at the base of the Elderly Tower Building together with 7 parking spaces at the base of Building "D".

Fifty-five of the above parking spaces, composed of 48 spaces under the tower building and 7 under Building "D", will be leased to permanent residents of the project (primarily occupants of multi-family housing units). The remaining 216 spaces will be for "pay-as-you-go" customers using the parking for short periods of time during the day or occupants of commercial space.

The rates of emission inside the garage are based on the following assumptions:

- Average travel in the garage: 400 ft. per car.
- Speed in the garage: 5 mile per hour.
- Traffic: High 8 hour average 106 cars/hour
  Afternoon peak 251 cars/hour.
- Normal mix of new and old cars (NOTE: The elderly residents in the tower building will have relatively few cars)
- No natural ventilation.
- Four air changes per hour, in accordance with the Uniform Building Code and City of San Francisco code requirements.
- Relatively clean air is used for ventilation.

Using the above assumptions, rates of emission inside the garage unit will be as shown in Table II below:

Table II - Emissions from Garage Areas

Pollutant	Grams/Hour	
	High 8 hours	Peak hour
Carbon monoxide	376	691
Hydrocarbons	49.1	116
Nitrogen oxides	21.8	51.5
Sulfur oxides	1.5	3.4
Particulates	2.7	6.3

The impact of these emissions on air quality is discussed under "Resulting Pollutant Concentrations."

Project-Related Natural Gas Combustion

The sponsor's architect-engineer has estimated that the single gas-fired hot water boiler serving the project will have a maximum rating of 4,000,000 BTU/Hr. Procedures and data contained in EPA publication AP-42 ("Compilation of Air Pollution Emission Factors, Second Edition") were used to calculate the quantity of emissions of pollutants due to natural gas combustion. If it is assumed that the boiler will be operated "at capacity" (full on), the boiler will produce pollution at the rate of 0.64 lb/hour. Referring to the BAAPCD "Guidelines for Air Quality Impact Analysis of Projects, June, 1975," page A2, it can be seen that "each point source found to be emitting in excess of 10 lb/hour of any pollutant under capacity operating conditions" is considered to be a significant source of pollution. Since the above emissions are 6.4% of this threshold emission rate, the impact of emissions due to natural gas combustion for the project is considered to be insignificant and can be ignored.

Construction Activities

The demolition of buildings on the project site is completed. The impact of construction activity on air quality is not expected to be significant.

Table III - Pollution Concentrations in Garage

Pollutant	Pollutant Concentrations		Standards				% Variance From Standards			
			State		Federal		State		Federal	
	High 8 Hrs	Peak Hr	8-Hr	1-Hr	8-Hr	1-Hr	8-Hr	1-Hr	8-Hr	1-Hr
CO	3.2 mg/m^3	5.9 mg/m^3	-	-	10 mg/m^3	40 mg/m^3	-	-	-68	-85.3
*HC	234 ug/m^3	743 ug/m^3	-	-	** 160 ug/m^3	** 160 ug/m^3	-	-	+46	+364
NO_X	180 ug/m^3	440 ug/m^3	-	470 ug/m^3	-	-	-	-61.7	-	-
SO_X	16 ug/m^3	29 ug/m^3	1310 ug/m^3	-	-	-	-99.1	-	-	-
Part.	23 ug/m^3	53 ug/m^3	-	*** 100 ug/m^3	-	*** 260 ug/m^3	-	-47	-	-79.7

* Concentrations adjusted to include only non-methane hydrocarbons.

** Standards shown are for a 3-hour averaging time.

*** Standards shown are for a 24-hour averaging time.

Resulting Pollutant Concentrations

Pollutant Concentrations Inside Garages

Based on the assumptions and emission rates shown above under "Emissions Inside the Parking Garage," and using the BAAPCD guidelines for air pollution calculations, air quality inside the garages will be as shown in Table III (opposite). The negative variances in Table III indicates the percentage that pollutant concentrations are below a particular State or Federal standard and, conversely, positive variances are percentages above a standard. It can be seen from Table III that concentrations of carbon monoxide, nitrogen oxides, sulfur oxides and particulates inside the garage will all be within the standards. Hydrocarbon concentrations inside the garage will have no direct health effects on individuals inside the garage as indicated in the following resume from the Department of Health, Education and Welfare (HEW) publication "Air Quality Criteria for Hydrocarbons":

> "Studies conducted thus far of the effects of ambient air concentrations of gaseous hydrocarbons have not demonstrated direct adverse effects from this class of pollutants on human health. However, it has been demonstrated that ambient levels of photochemical oxidant, which do have adverse effects on health, are a direct function of gaseous hydrocarbon concentrations; and when promulgating air quality standards for hydrocarbons, their contribution to the formation of oxidants should be taken into account."

The effect of hydrocarbon emissions from the garages on oxidant formation in the air basin will be insignificant, and is discussed in the following section of this assessment.

Pollutant Concentrations in Outdoor Areas

The critical outdoor location for pollutant concentrations is at the corner of Stockton and Sacramento Streets. Air quality at this location will be affected by emissions from vehicular traffic along Sacramento and Stockton Streets, by emissions due to project-related natural gas combustion, and by emissions vented from garage spaces. Table IV adds the effects of these three sources of emissions to the existing ambient air quality resulting in a subtotal which excludes the affect of garage emissions and a total which includes garage emissions. Analysis of Table IV indicates the following:

Carbon monoxide concentrations are affected only to a minor extent by emissions due to project-related natural gas combustion and project-generated street traffic. The subtotal in Table IV for these impacts and ambient concentrations (but excluding impact of garage emissions vented to outdoor areas) is 73% of the Federal 8-hour standard for CO centrations. However, the impact of venting garage emissions to either Stockton or Sacramento Streets is significant and results in CO concentrations which are 5.5% above the Federal 8-hour standard.

Table IV - Projected Air Pollution Concentrations at Corner of Sacramento and Stockton Streets Upon Completion of Project

Item	CO (mg/m^3)	HC (ug/m^3)	NO_X (ug/m^3)	SO_X (ug/m^3)	Particulate (ug/m^3)
Project Impacts Excluding Garage:					
Natural gas Vehicular	*	*	*	*	*
1 Hr.	0.82	0.12	0.098	0.003	0.008
8 Hr.	0.11	0.016	0.013	0.0004	0.001
Ambient Air Quality:					
1 Hr.	**12.68	-	-	-	-
8 Hr.	** 7.24	-	-	-	-
24 Hr.	-	-	-	24 (1)	129(1)
Annual	-	***1267	56	6(2)	-
Subtotal (NG Vehicular and Ambient, but Excluding Garage)					
1 Hr.	13.5		56.013+		
3 Hr.		1267+			
8 Hr.	7.35				
24 Hr.	-			24.0004-	129.001+
Annual	-				
Garage Impacts (Emissions excluding to Stockton Street)					
1 Hr.(Peak)	5.9	743	440	29	53
8 Hr.(Ave)	3.2	234	180	12	23

Total (NG, Vehicular, Garage and Ambient)					
1 Hr.	19.4		496		
3 Hr.		1501+			
8 Hr.	10.55		236		
24 Hr.				36-	152-
Annual					
Standards					
1 Hr. - State	46	-	470	1310	-
Federal	40	-	-	-	-
State	-	-	-	-	-
3 Hr. Federal		160		1300	
State	-	-	-	-	-
8 Hr. Federal	10	-	-	-	-
24 Hr. State	-	-	-	105	100
Federal	-	-	-	-	260
State	-	-	-	-	-
Annual-Federal	-	-	100	-	-

Notes: * Emission of pollutants due to natural gas combustion is at the rate of 0.64 lb./hour maximum. Emission rates of less than 10 lb./hour from point sources are considered by the Bay Area Air Pollution Control District (BAAPCD) to have negligible impact on air quality.

** Calculated values using procedures described in BAAPCD "Guidelines for Air Quality Impact Analysis of Projects, June, 1975."

*** Source: BAAPCD, 939 Ellis Street, San Francisco, California

(1) Source: Environmental Protection Agency (EPA). Date represents the second highest concentration of pollutants occurring in San Francisco during 1974

Hydrocarbon concentrations have no direct adverse health effects on individuals, as indicated by the HEW quotation cited above under "Pollutant Concentrations Inside Garages." The emissions of hydrocarbons due to garage exhausts vented to the streets, plus exhausts from project-related traffic on Sacramento and Stockton Streets, will be 0.00074% of total hydrocarbon emissions in the Bay Area Air Basin. Project-related hydrocarbon emissions will, therefore, have an insignificant affect on formation of oxidant in the air basin.

Nitrogen oxide concentrations at the corner of Stockton and Sacramento Streets are not significantly affected by emissions from project-related natural gas combustion or project-related vehicular traffic on streets. However, garage emissions vented to the streets cause NO_X concentrations to exceed the State 1-hour standard by 5.5%. 8-hour concentrations of 236 ug/m^3 are substantially above the annual federal standard of 100 ug/m^3, again primarily due to garage emissions vented to streets. These concentrations over a prolonged period of time can result in adverse health effects for humans (acute bronchitis) and adverse effects on vegetation (in particular, leaf abscission).

Sulfur oxide concentrations in outdoor areas will be insignificant even after considering the effect of project-related emissions.

Particulate concentrations will exceed the State 24-hour standard by 29% if only emissions from project-related street traffic and project-related natural gas combustion are added to ambient concentrations. Ambient concentrations (without project impacts) account for this excess above the standard. Also, this ambient concentration represents a "worst-case" condition because the second-highest concentration occurring in San Francisco during 1974 was used as the ambient concentration. The impact of garage emissions vented to the streets is significant, raising the total "worst-case" concentrations to 52% above the State 24-hour standard. The high ambient concentrations (without project impact) is considered to be due primarily to windborn dust and is, therefore, intermittent with minimal adverse effects. The contribution of particulate from garage emissions is significant if the exhausts are vented directly to the street with little benefit from mixing and dispersion. Adverse affects on human health, vegetation and materials would only occur if there was prolonged exposure to concentrations in excess of the 24-hour state standard, which is not likely to occur.

Conclusions

1. Air quality inside garages will be generally satisfactory provided since there will be four air changes per hour by means of forced-air-ventilation

2. Air quality in outside areas, in particular along Sacramento and Stockton Streets adjacent to the project, will be significantly affected by exhausts inside the garage spaces if these exhausts are vented directly to Sacramento or Stockton Street. Concentrations of carbon monoxide and nitrogen oxides would exceed air quality standards and, under "worst-case conditions," particulate standards would be exceeded. The affect of other project-related emissions (natural gas combustion, project-related street traffic) on air quality in outside areas is insignificant.

Recommended Mitigation

1. Garage emissions must not be exhausted directly to Sacramento or Stockton Streets. Instead, the exhausts must be raised to a sufficient elevation above the plaza level so that the impacts of the pollutants on street level pedestrians and attendants at the entrances to the parking structure will be insignificant. In addition, these emissions must not impact adversely on residents of the housing units.

2. Assignment of preferred parking spaces in the garage as an incentive to commuters is not recommended because use of the parking spaces by commuters is not expected to be significant.

Provided the above mitigation measures are implemented, it is concluded that the project will have no significant adverse impact on air quality in the vicinity of the project.

NOISE

This assessment will examine the existing noise environment in the vicinity of the project and will compare these noise levels against HUD standards for external (outdoor) and interior (indoor) noise exposures as stated in HUD Circular 1390.2, "Noise Abatement and Control."

SOURCES OF NOISE

Vehicular Traffic

The dominant noise source at the site is vehicular traffic along Stockton and Sacramento Streets. This includes a peak hour traffic volume on Stockton Street of approximately 750 vehicles per hour (5% trucks and buses) and 561 vehicles per hour (7% trucks and buses) on Sacramento Street. Normal traffic noises are aggravated by the existence of diesel bus lines adjacent to the site, an 18% gradient on Sacramento Street, stop lights at the corner of Sacramento and Stockton Streets, and three bus stops at the above intersection. In addition, the project is surrounded by 4 to 10 story buildings which tend to reflect, and thus increase, traffic noise.

The greatest single noise source is the #55 Sacramento Street bus which stops at the northeast corner of Stockton and Sacramento Streets, and must then accelerate up the steep Sacramento Street grade toward the west. This bus service operates between 6:30 A.M. and 1:30 A.M. The periods of highest noise level are between 8-9 A.M. and 4-6 P.M., which are the typical peak commuter periods. On Sacramento Street, the evening period is far noisier than the morning period because the street is one-way moving westward from the Central Business District. An additional sharp but brief increase in noise levels occurs about 2:30 A.M. on Sacramento Street as the result of garbage collection activity.

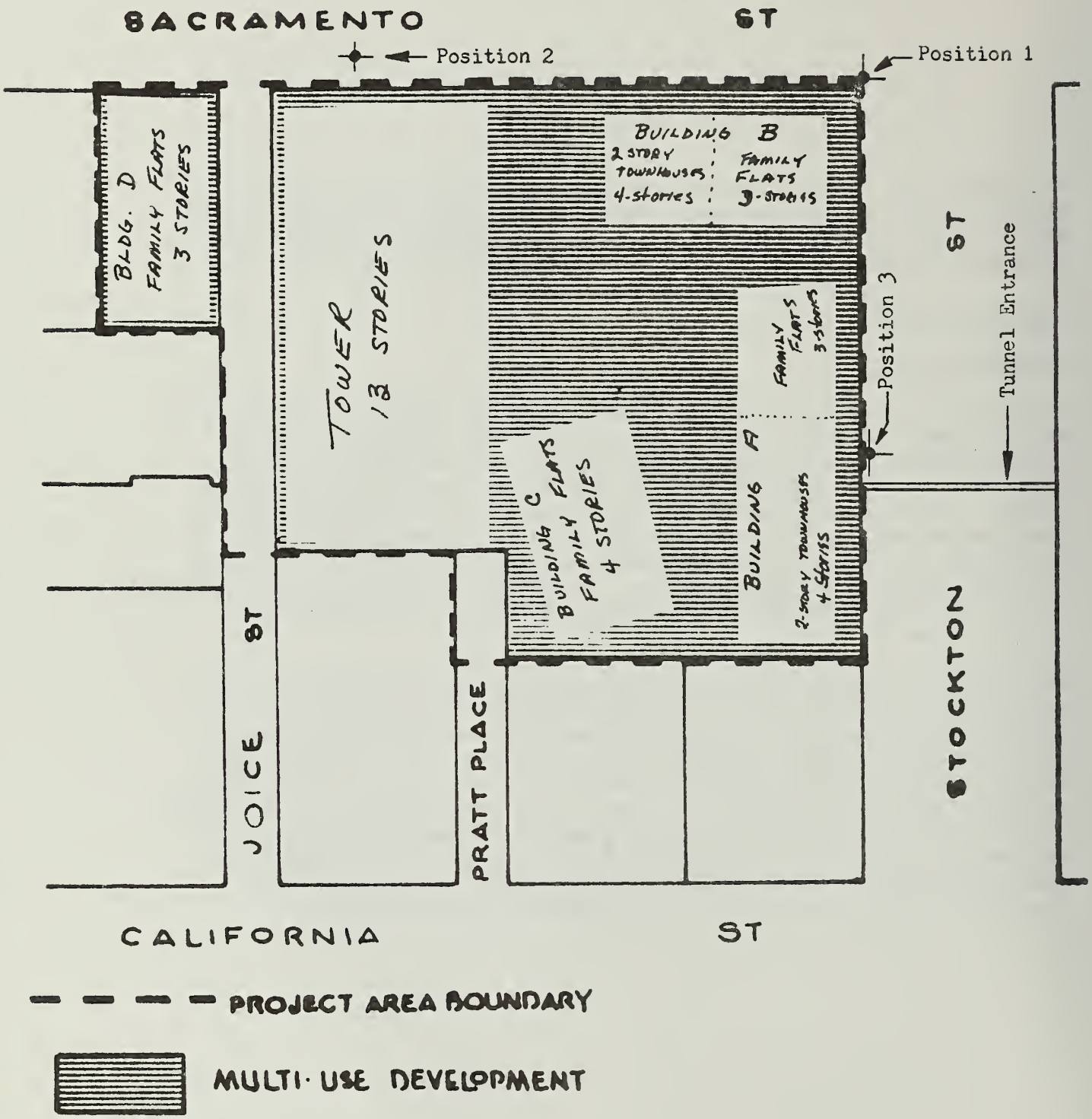


FIGURE 1. AMBIENT NOISE MEASUREMENT POSITIONS.

Demolition and Construction Noise

Demolition of buildings at the project site is completed. It is expected that construction noise will have a negative short-term impact upon the surrounding area. Excavation and foundation work is expected to be particularly noisy, since the site appears to include a large amount of shallow bedrock.

AMBIENT NOISE MEASUREMENTS

Noise level measurements were taken at three locations as shown in Figure 1. These measurement positions were selected because they bracket the major areas of noise exposure due to vehiculat traffic along Sacramento and Stockton Streets and noise exposures between the measurement positions can be obtained by interpolation. The HUD Noise Measurement System (supplied by the National Bureau of Standards, Washington, D. C.) was used for these measurements. Table 1 shows a direct comparison of data printed out by the Noise Measurement System and the HUD General External Exposure Standards for Noise. This comparison results in the following acceptability ratings:

Position No.	HUD Acceptability Rating
1	Normally unacceptable
2	Normally unacceptable
3	Normally unacceptable

The "normally unacceptable" ratings for positions No. 1 and 3 are due to two factors:

a) Noise levels exceeding 65 dB(A) for more than 8 hours per day.

b) Loud repetitive sounds on site (vehicular traffic) during normal sleeping hours (11 P.M. to 6 A.M.).

TABLE 1. COMPARISON OF FIELD NOISE MEASUREMENTS WITH HUD EXTERNAL NOISE EXPOSURE STANDARDS

Standards for General External Exposures Per Circular 1390.2 (Noise Abatement and Control)	Field Noise Measurements			
	Position #1	(1) Position #2	Position #3	Remarks
UNACCEPTABLE (Exceptions are strongly discouraged and requires a 102(2)c environmental statement and the Secretary's approval): Exceeds 80 dB(A) 60 minutes per 24 hours	Exceeded 80 dB(A) 43 min. per 24 hrs.	(1) Exceeded 80 dB(A) 14 min. per 24 hrs.	Exceeded 80 dB(A) 28 min. per 24 hours	Positions #1, #2 and #3 not "unacceptable" at the 80 dB(A) threshold
Exceeds 75 dB(A) 8 hours per 24 hrs.	Exceeded 75 dB(A) 2.49 hrs per 24 hours	Exceeded 75 dB(A) 0.88 hrs per 24 hours	Exceeded 75 dB(A) 2.35 hrs per 24 hours	Positions #1, #2 and #3 not "unacceptable" at the 75 dB(A) threshold
DISCRETIONARY - NORMALLY UNACCEPTABLE (Approvals require noise attenuation measures, the Regional Administrator's concurrence and a 102(2)c environmental statement) Exceeds 65 dB(A) 8 hours per 24 hours	Exceeded 65 dB(A) 14.64 hrs per 24 hours	(1) Exceeded 65 dB(A) 6.72 hrs per 24 hours	Exceeded 65 dB(A) 15.51 hrs per 24 hours	Positions #1 and #3 are "normally unacceptable".
Land repetitive sounds on site	922 events over 80 dB(A) per 24 hours	427 events over 80 dB(A) per 24 hours	606 events over 80 dB(A) per 24 hours	Loud repetitive sounds due to diesel-driven buses and trucks along Sacramento and Stockton Streets
DISCRETIONARY - NORMALLY ACCEPTABLE. Does not exceed 65 dB(A) more than 8 hours per 24 hours	Exceeded 65 dB(A) 14.64 hrs per 24 hours	(1) Exceeded 65 dB(A) 6.72 hrs per 24 hours	Exceeded 65 dB(A) 15.51 hrs per 24 hours	Position #2 is "normally acceptable" by this criteria but "normally unacceptable" due to loud repetitive sounds on site (see above)
ACCEPTABLE Does not exceed 45 dB(A) more than 30 minutes per 24 hours	Exceeded 45 dB(A) 23.95 hrs per 24 hours	Exceeded 45 dB(A) 23.92 hrs per 24 hours	Exceeded 45 dB(A) 23.27 hrs per 24 hours	

NOTES: (1) Measurements for Position #2 were taken 8 ft. outside the property line on a street light pole and 16 ft. from uphill vehicular traffic. Data shown has been adjusted to the desired location at the property line using procedures prescribed by the National Bureau of Standards (NBS).

The "normally unacceptable" rating for position No. 2 is due to loud repetitive sounds on site (vehicular traffic) during normal sleeping hours.

A definition of "normally unacceptable" is given in the HUD "Noise Assessment Guidelines," page 1, as follows:

> "The noise exposure is significantly more severe so that unusual and costly building constructions are necessary to assure some tranquility indoors, and barriers must be erected between the site and prominent noise sources to make the outdoor environment tolerable."

NOISE EXPOSURE STANDARDS

Noise mitigation is required to convert the "normally unacceptable" environment to an "acceptable" level for both exterior and interior noise exposures. Acceptable levels of noise exposure are defined in HUD Circular 1390.2 as follows:

For interior exposures:

> "Does not exceed 45 dB(A) more than 30 minutes per 24 hours."

For interior exposures:

> "Does not exceed 55 dB(A) for more than an accumulation of 60 minutes in a 24-hour period, and
>
> Does not exceed 45 dB(A) for more than 30 minutes during night time sleeping hours from 11 p.m. to 7 a.m., and
>
> Does not exceed 45 dB(A) for more than an accumulation of eight hours in any 24-hour day."

IMPACT OF PROJECT DESIGN

Some mitigation of exterior exposures to noise is inherent in the project design by virtue of the following design features:

1) The housing development will be elevated above Stockton Street at measurement positions No. 1 and 3, which are the worst noise exposure locations. This will eliminate much of the line-of-sight noise transmission from noise sources along Stockton Street (and much of Sacramento Street) to noise receptors located in the plaza area of the housing development.

2) The buildings are positioned on the project site so as to shield much of the plaza area from sound emanating from Stockton and Sacramento Streets.

The above notwithstanding, the project design includes other features which make it difficult or impossible to meet the HUD noise exposure standards in the existing noise environment. These negative features include:

1) No mechanical ventilation for living units; therefore, windows must be opened to obtain fresh air, thereby reducing noise attenuation through wall assemblies. In some cases, HUD interior noise exposure standards will be exceeded.

2) The barrier wall located between the Elderly Tower Building and Building "B" has large openings and, therefore, will not provide effective shielding of the plaza area from noise emanating from traffic on Sacramento Street.

3) Balconies facing the plaza area between the Elderly Tower Building and Buildings A, B, and C will tend to reflect street noise into the plaza area, thereby increasing the traffic noise level for exterior exposures.

NOISE SOURCE ATTENUATION

Some progress has been made in development of quieter buses which has reduced noise levels at the project site. Officials of the San Francisco Municipal Railway (MUNI) and the City of San Francisco Planning Department have indicated that 200 of 400 diesel-driven buses have been retrofitted thus far to reduce noise levels. Changes being implemented include:

(1) Reduction of maximum engine speeds by approximately 200 RPM,

(2) Installation of new variable-speed fan assemblies,

(3) Installation of new muffler assemblies,

(4) Use of smaller fuel injectors which reduce exhaust noise.

Prior to the above modifications, the noise level from MUNI buses was a maximum of 92 dB(A) at 50 feet and normally ranged between 82 and 86 dB(A). Tests performed by the City of San Francisco and the California Department of Transportation (CALTRANS) indicate that the above retrofit of buses will reduce noise levels by 6 to 10 dB(A) at 50 feet. Reduced noise levels (after retrofit) will, therefore, be a maximum of from 82 to 86 dB(A) at 50 feet. This is a significant reduction inasmuch as 82 dB(A) is half as loud as 92 dB(A); however, it is doubtful that retrofit of the buses by itself will make the noise exposure at the project site acceptable because the 65 dB(A) threshold will still be exceeded at the property line for more than 8 hours per day.

Buses are assigned to the #30, #30 express, and #55 routes, which pass by the project site, on a random basis and are changed daily. Therefore, it is not possible to determine the extent that the noise data in Table I reflects the quieter, retrofitted buses. However, for the purpose of this assessment, it is assumed that the same ratio of retrofitted and nonretrofitted buses which exists in the city as a whole is reflected in the data of Table I; i.e., 50% retrofitted buses and 50% nonretrofitted buses. MUNI officials have indicated that it was planned to accomplish the retrofitting of buses concurrently with engine overhauls; however, lack of mechanics has made it difficult to accomplish even routine maintenance of buses and no retrofitting is being accomplished at this time. Because completion of the retrofit program is contingent upon availability of mechanics, which cannot be adequately predicted, it is assumed that the noise environment due to bus traffic at the time of completion of the project will be essentially the same as that shown in Table I. It is not considered practical to schedule only the quieter, retrofitted buses for the routes adjacent to the project site.

MITIGATION

The project design must be modified to include mitigating measures to assure that interior and exterior noise exposures will be "acceptable" as defined in HUD Circular 1390.2. These mitigating measures shall include, but not necessarily be limited to, the following:

For interior exposures;

1. Provide mechanical ventilation of interior living spaces as necessary, to preclude having to open windows for ventilation at times when maximum noise attenuation is required.

2. Provide adequate sound-isolating wall assemblies (windows, walls, ventilation openings, etc.) to attenuate traffic noise.

For exterior exposures;

1. All balconies which will reflect traffic noise into the outdoor living areas of the project to such an extent as to cause HUD exterior noise exposure standards to be exceeded shall have sound-absorbing material or sound-reflecting surfaces (or other design features) which will mitigate this problem, or these balconies to be eliminated.

2. Provide an adequate acoustical barrier along the perimeter of the project between the Elderly Tower Building and Building "B."

Additional Requirement

All noise mitigation measures for the project must be designed by an experienced acoustical engineer licensed in the State of California, or an experienced acoustical engineer who is a member of the Institute of Noise Control Engineering (INCE). The above shall be indicated by the acoustical engineer's signature and stamp.

The above mitigation measures must be viewed as minimum requirements. Also, specific design details for mechanical ventilation systems, sound-isolating wall assemblies, modifications or deletion of balconies, and acoustical barriers have purposely been omitted to allow the Sponsor maximum latitude in design of the project. It is incumbent upon the Sponsor, through the acoustical consultant, to demonstrate how the above minimum mitigation measures are to be implemented, and to provide such other mitigation as may be required to meet the noise standards in HUD Circular 1390.2.

HOUSING NEED

For a long time, it has been known that there existed a need for low and moderate income housing in Chinatown and especially for the elderly. In 1970, the City with a HUD 701 Planning Grant undertook a study to determine the housing needs of the Chinatown area and to develop a strategy for meeting the identified need. For the purpose of the study, the Chinatown area encompassed the area bounded by Van Ness, Bay, Sansome, and Bush Streets. This study which was entitled San Francisco Chinatown Housing and Recreation Program substantiated the long-known fact that persons in the Chinatown area were living in substandard and overcrowded condition and that newly constructed housing as well as a substantial amount of the existing housing was renting in excess of the rent-paying ability of many of those most in need of standard housing.

The study indicated that over 10,000 elderly persons resided in the Chinatown area. The study also indicated that over 26% of the population lived in overcrowded conditions. In 3,700 housing units, over 17,000 persons were found to be living. Substandard housing conditions were found to be widespread with over 60% of the housing stock (over 20,000 units) exhibiting some form of code violation. A 1974 study undertaken by the Bureau of Building Inspection revealed that 42% of the housing stock exhibited some form of code violation.

Over the past 15 years, the population of the area has continued to grow while the overall housing supply has declined slightly. According to the study, over 2,300 housing units concentrated in the core area of the larger Chinatown area were lost. The substantial majority of housing constructed in this area since the early 1960's has been for middle and upper income persons. No new subsidized housing for the elderly has been constructed in the Chinatown core area which continues to evidence a need for low and moderate income housing for the elderly.

Recent figures provided by the San Francisco Planning Department support the fact that there is a need to provide low income housing in Chinatown for the elderly. Over 35% (2250 households) of the households in the Chinatown core area (This area represents only a portion of the area covered in the 1970 study referred to above and includes Census Tracts 107, 113, 114 and 118) are elderly. Of the elderly households in the core area of Chinatown, 67% (1510 households) are very low income (have incomes of less than 50% of the City's median income as compared to the city wide average of 20%. 50% (1441 persons) of the elderly people in Chinatown live in housing which lacks adequate plumbing facilities. Hotel or guest rooms which lack kitchen and generally exclude plumbing comprise 50% of all the housing in Chinatown. The majority of this type of housing is occupied by elderly persons. The study undertakes in 1974 by the Bureau of Building Inspection indicated that 48% of the housing in the Chinatown core area had some form of code violation. 50% of the elderly households in Chinatown pay more than 25% of their income for rent. City wide 19% of those over 65 years of age have incomes below the poverty level. In Chinatown, 32% of the elderly (1200 persons) have incomes below the poverty level.

While the proposed housing project will be located in Chinatown for the purpose of addressing the needs of the immediate area, occupancy will not be restricted to only residents of Chinatown. City wide, according to the City's 1976 Housing Assistance Plan, over 28,000 elderly households throughout the city are in need of housing assistance. Of this number, approximately 150 elderly persons will require housing assistance in the immediate future due to being displaced by public action. The San Francisco Housing Authority has over 4,000 elderly households on the waiting list for zero or one bedroom units.

The need for low income elderly housing in San Francisco exists what does not exists is an adequate supply of low income housing especially in the Chinatown core area. The proposed 180 unit housing project to be located at Sacramento and Stockton Streets, which was identified in the 1970 San Francisco Chinatown Housing Study as one of the sites on which housing should be developed, is being constructed to address a portion of this long recognized housing need.

CULTURAL RESOURCES

1. Historical Considerations

On the site there are no known historic, archeological or architectural features, since the site is essentially raw land, having been cleared of the housing which formerly occupied it.

Directly across from the Project on Sacramento Street on the corner of Joice is the Donaldina Cameron House, which has been designated by the Board of Supervisors as a San Francisco Landmark. This is administered by the Occidental Board Home, the mission of the Presbyterian Church to the Chinese in San Francisco and the only "foreign mission" enterprise ever carried on in the United States. It was founded in 1873, and it moved to its present location in 1881. After the fire of 1906, the building was rebuilt of clinker brick on a substructure of concrete and rubble. The effect of the Landmark designation is to prevent any exterior alterations to the structure without specific City approval. Cameron House is now a very active community center, serving mainly the youth of Chinatown.

The State Historical Board has been consulted regarding the Donaldina Cameron House. It is the opinion of the State Historical Board that the structure is potentially eligible for inclusion in the National Register of Historic Places; it has been identified in three separate surveys but has not been nominated.

Applying the definition of "Criteria of Effect" to this project, it is the opinion of HUD that the Stockton-Sacramento project will cause no change "beneficial or adverse, in the quality of the historical, architectural, archeological or cultural character that qualifies the property" (Cameron House) "under the National Register Criteria." In accordance with Section 106 of the National Historic Preservation Act of 1966, concurrence with HUD's funding of "no effect" has been requested from the State Historic Preservation Officer. (See Appendix D)

It is expected that the presence of Cameron House across the street from the Project may be of positive value to some project residents who may participate in some of the activities there.

2. Cultural Assets

Residents of the Project, which is near the core of Chinatown, will have a wide range of cultural and recreational facilities available to them within a few blocks.

The Chinatown Branch of the San Francisco Public Library is located at 1135 Powell Street.

The following centers offer group work programs, recreation and craft services, adult study and service groups and social casework services:

Donldina Cameron House Community Center, 920 Sacramento Street
(discussed above)
YWCA - Clay Street Center, 965 Clay Street
YMCA - Chinese Branch, 855 Sacramento Street
Salvation Army - Chinatown Corps, 2 Waverly Place

SOLID WASTE

For the purpose of defining the distinctions between different kinds of wastes, the State Water Resources Control Board has adopted a statewide grouping system. All waste materials are in either Groups 1, 2 or 3 in this system, and each group has its own particular storage, handling, collection and disposal requirements. A summary of the groups is presented in Appendix I. In general, toxic and hazardous wastes are in Group I; Group 3 wastes are inert solids, such as construction and demolition wastes; and all other wastes, including most residential and commercial refuse, are in Group 2.

This assessment deals primarily with Group 2 materials which will be generated by the future residents of the Mei Lun Yuen development in Chinatown.

No Group I hazardous materials are anticipated as a result of this development; thus the collection and disposal of these materials is not covered in this assessment.

Current Storage* and Collection Procedures

Household waste consisting of waste or discarded food, animal and vegetable matter, discarded containers of food, animal and vegetable matter and ashes shall be placed in suitable metal cans with tight fitting metal lids. Waste paper and boxes and other refuse materials not subject to putrefaction or decay, and cuttings from trees, lawns and gardens may be placed in any suitable container. The Director of Public Works has established the maximum size container for residences and flats as 32 gallons; however, at the discretion of the refuse collector, an oversize container up to a maximum of 64 gallons may be used. Containers for apartment houses up to 600 rooms shall be of types and sizes, each not exceeding 80 gallons in capacity, suitable for emptying the contents thereof into the collector's container. Containers for apartments over 600 rooms shall be sized as required of the refuse collector.

*All solid waste must be stored in conformance with requirements of the San Francisco Fire Code.

Construction and demolition waste shall be removed from the site within a reasonable time established by the permit issued by the Building Inspector of the Department of Public Works, for each construction and/or demolition job.

Street sweepings shall be stored in unobtrusive areas with complete respect to the wishes of the area residents and picked up daily by City forces.

Recreational wastes shall be stored in cans or removed to the transfer station by the scavenger and City forces.

Abandoned, wrecked, dismantled or inoperative vehicles or parts thereof create an unattractive nuisance and shall be abated in accordance with Ordinance No. 249-74 dated May 20, 1974.

The collection of household, commercial and industrial, and institutional waste is accomplished by two refuse collection companies licensed by the Director of Public Health. The Golden Gate Sisposal Company serves the Chinatown Area. Collection of the waste shall be at least once a week from all dwellings and commercial and industrial facilities. Owners of all dwellings are now required to subscribe to and pay for refuse collection service to that dwelling in accordance with Ordinance No. 20-72 which became operative on and after July 1, 1972.

To arrange for refuse collection, the potential customer telephones the company servicing the area and requests service. Refuse collection and disposition charges and fees for residences, flats and apartment houses of not more than 600 rooms are set by a Refuse Collection and Disposal Rate Board established by the City Charter; charges and fees for other facilities are subject to contract between the waste producer and the refuse collection company servicing the area.

Leaves, tree cuttings and litter are collected and hauled to the Transfer Station by City forces and equipment five days a week. Street sweepings are collected and hauled to the Transfer Station by City forces and equipment. The street sweepings are dumped at the Transfer Station five days a week, Monday through Friday.

Debris boxes may be utilized for the loading and transporting of excavated and waste materials derived from the construction, reconstruction, alteration, or demolition of real property structures; or the removal of debris and waste materials not required by law to be otherwise disposed of by owners, lesses or occupants of real property in accordance with Section 725.2, Chapter X, San Francisco Public Works Code. Six debris box owners are registered for operation with the Department of Public Works. The potential debris box customer selects a debris box operator and negotiates a contract for the use of the box including the disposition of the waste in a dump. The boxes can be placed on the sidewalks or in the roadway as directed by the Department of Public Works. All contents of debris boxes shall be completely covered at all times while being transported through the City streets.

Receptacles used for the collection of household, commercial and industrial, institutional, and domestic animal wastes may be placed upon the sidewalk in front of the producer's premises only on the day the wastes are to be collected by the refuse collectors or after 6:00 P.M. of the day prior to the day of collection. The producer must remove the receptacles from the sidewalk immediately upon opening the premises for business on the day of collection in accordance with Ordinance No. 155-73.

The refuse collected by the refuse collectors must be disposed of at the Transfer Station as designated by the Board of Supervisors in accordance with the Refuse Collection and Disposal Ordinance.

Transfer Station

A large truck transfer station serving San Francisco is situated at the foot of Tunnel Avenue and Beaty Road in the southeast corner of the City adjacent to the County line. This facility is operated seven days a week by the Solid Waste Engineering and Transfer System to handle the mixed municipal, commercial and industrial waste from San Francisco. Nearly an acre of floor space in the transfer building is capable of accommodating 110 route trucks an hour and up to 5,000 tons of refuse daily. As incoming collection trucks unload into a large pit two Caterpillar D-8 tractors run over the waste, breaking and smashing large bulky items such as lumber, refrigerators and sofas. The "Cats" then push the waste to the tunnel area where approximately half of the waste, unrecoverable materials which are collected from commercial accounts, is loaded directly into transfer trucks and trailers.

The household waste, approximately one-half of the total, is conveyed to a 300-horsepower horizontal hammermill which breaks open bags and exposes tin cans. A conveyor carries the shredded waste to the counter-rotating magnetic drums which pull out the cans which are then loaded into large open top vans and shipped to Sacramento for further processing. The remainder of the waste is loaded into transfer trucks and trailers. The recovery system is privately financed and operated by Los Angeles By-Products Company.

The San Francisco Transfer Station was used as a model for the development of the guidelines contained in the State minimum standards for Solid Waste Handling and Disposal (California Administrative Code, Title 14, Div. 7, Chap. 3). As of October 1975, the transfer station was operated over and above the preceding State minimums which become applicable on July 1, 1976.

Completely enclosed transfer trucks and trailers haul the waste from the Transfer Station to the Mountain View Disposal Site upon the terms and conditions included in the Waste Disposal Agreement signed in November 1975. The waste dumped at the Transfer Station is transported to the Mountain View disposal site the same day, although there is capacity in the pit for about two days' storage.

Disposal Facilities

On March 2, 1972, the California State Water Resources Control Board issued the Classification of Solid Waste Disposal Sites shown in Appendix II. The previously discussed waste class groupings were established at the same time.

The regional water quality control boards were instructed to determine the potential threat posed by each disposal site to the State's waters. Then, discharge specifications were issued to each site and the site operator was required to file for a discharge permit. In so doing, he was required to indicate how site modifications and methods of operation could meet the specifications before a permit was issued. Periodic inspections are made by the regional board staff to note compliance - or lack of same - with the permit. In extreme cases, the regional boards can issue cease and desist orders or revoke permits.

In essence, the categorization of a site into either Class I, Class II, or Class III reflects the degree of probability that the wastes in the site may come in contact with water and/or pollutants could be conveyed from the site boundaries to state waters. For example, a Class I site has an extremely low probability; a Class III designation implies certainty of contact and/or conveyance. Class I sites may accept Group 1, 2 or 3 wastes; Class II sites may accept Group 2 and 3 wastes; and Class III sites may accept only Group 3 wastes.

No disposal facilities are available within San Francisco. The solid waste from the transfer station and some construction and demolition waste are disposed of in Mountain View, Santa Clara County. The remainder of the construction and demolition waste is disposed of in the privately owned dump sites in Colma, San Mateo County. Any hazardous and extremely hazardous wastes and other Group I wastes are disposed of in Class I dumps in Contra Costa County.

The site in Mountain View covers 655 acres of low land at the northern end of Stierlin Road which is being developed into Shoreline Regional Park. It is a typical example of a local sanitary fill in which the solid wastes are hauled from the transfer station to the landfill site by covered truck and trailer. The park which is being developed with San Francisco refuse forms a wide defense perimeter with open green spaces and fresh air and adds a recreational resource to the region which will be complete with a small zoo, amphitheater, equestrian center, golf course, lakes, tennis courts, swimming pools, picnic areas, hiking and walking trails, boating and rifle-pistol and archery ranges. In addition, four wells have been drilled and methane gas generated from the refuse is being pumped on an experimental basis.

A new contract was signed in November 1975 which will allow San Francisco to continue to dispose of Group 2 and 3 waste in the Mountain View landfill for the next eight years. Wast discharge requirements from the Regional Water Quality Control Board are outlined in that Agency's resolution No. 70-67 dated August 27, 1970. The agencies responsible for inspection of the site include the Regional Water Quality Control Board, the Bay Area Pollution Control District, the City of Mountain View, and the Army Corps of Engineers.

The City and County of San Francisco is currently preparing its medium- and long-range solid waste management plan as required by the State Solid Waste Management and Resource Recovery Act of 1972. The short-term portion of the study has been completed. Transportation of San Francisco solid wastes by rail-haul to a remote desert region in Lassen County could convert barren and unusable lands into possible grazing land. This site could accept all Bay Area solid refuse for several hundred years. The rail-haul to Lassen County was evaluated by the San Francisco Department of Public Works, but it was not implemented as the Mountain View solution was more economical.

Numerous recovery systems will be studied by the City in cooperation with private industry during 1976 and 1977 to determine the best system for disposing of San Francisco's solid waste. Among those studied will

be the Bay Delta Resource Recovery Demonstration, Phase 2, at the Transfer Station, and various pyrolysis, incineration and fuel recovery systems. The Department of Public Works will review development in the "state of the art" of solid waste management, particularly systems most applicable to San Francisco. In 1978, the best disposal method and resource recovery system for San Francisco will be selected and financing obtained. Design of the system will be accomplished in 1979 and 1980 and the system constructed in 1980 and 1981.

Expected Impacts

It is estimated that the annual quantity of solid waste generated in San Francisco in 1975 was 1,281,000 tons of which an estimated 1,209,000 tons was disposed of out of the County. The annual quantity of solid waste produced in San Francisco is estimated to increase to 1,409,000 tons in 1990 and then decrease to an annual rate of 1,259,000 tons in 2000. Seven volunteer recycling centers are operating in San Francisco and they, along with the scavenger companies, are estimated to recycle approximately 37,000 tons of materials in 1975. All of these estimates include the solid wastes generated by residents of Chinatown. At full development it is anticipated the residents of the Mei Lun Yuen development will generate less than 500 tons per year which is less than 0.01% of the total generated by the City in 1975. Thus the impact upon the Mountain View or any future disposal site is expected to be negligible.

In addition, it is estimated that well over half of the future residents of Mei Lun Yuen are probably already living in San Francisco and their expected production of solid waste is already included in the City's calculations.

When the contract is let for construction, the contractor will include the disposal of the construction-generated solid waste as part of the package. Some of this may go to the Mountain View site. The Colma Hillside rubbish site which handles much of the construction waste from San Francisco as well as the general public in the area is located along Hillside Road at the base of San Bruno Mountain and is operated by the Colma Dump Company. Waste received is compacted and spread with a loader and crawler tractor. The site is handling 250 tons per day during a five day week and should remain operational until 1984 at the present rate of filling. The site is inspected by the San Mateo County Health Department, the Regional Water Quality Contract Board and the State Department of Public Health. They are the likely recipients of the construction waste from this project and in response to a telephone call noted that these wastes would probably not shorten the life of the dump by more than a day. There will be a very minor impact resulting from the disposition of dust on city streets during construction and hauling to disposal sites. Significant quantities of dust or debris spillage will not be encountered due to a city ordinance requiring contractors to water spray during construction and to clean spillage along the land route. The Solid Wastes Section of the California Department of Public Health concurs with this.

APPENDIX I
Waste Grouping System
(State Water Resources Control Board)

GROUP 1 WASTES

Group 1 wastes consist of or contain toxic substances and substances which could significantly impair the quality of usable waters. Examples include but are not limited to the following:

Municipal Origin

- Saline fluids from water or waste treatment processes
- Community incinerator ashes
- Toxic chemical toilet waste

Industrial Origin

- Brines from food processing, oil well production, water treatment, industrial processes, and geothermal plants
- Toxic and hazardous fluids such as cleaning fluids, petroleum fractions, acids, alkalies, phenols, and spent washing fluids
- Substances from which toxic materials can leach such as ashes, chemical mixtures, and mine tailings
- Rotary drilling mud containing toxic materials

Agricultural Origin

- Pesticides or chemical fertilizers
- Discarded chemical containers

Other toxic waste such as compounds of arsenic, mercury, or chemical warfare agents.

GROUP 2 WASTES

Group 2 wastes consist of or contain chemically or biologically decomposable material which does not include toxic substances nor those capable of significantly impairing the quality of usable waters. Examples include but are not limited to the following:

Municipal Origin

- Garbage from handling, preparation, processing, or serving of food or food products
- Rubbish such as paper, cardboard, tin cans, cloth, glass, etc.
- Street refuse such as sweepings, dirt, leaves, catchbasin cleanings, litter, yard clippings, glass, paper, wood, and metals.
- Dead animals and portions thereof
- Abandoned vehicles
- Sewage treatment residue such as solids from screens and grit chambers, dewatered sludge, and septic tank pumpings.
- Water treatment residue such as solid organic matter collected on screens and in settling tanks
- Ashes from household burning
- Tires and rubber scrap

Industrial Origin

- Garbage from handling, preparation, or processing of food or food products
- Construction and demolition materials such as paper, cardboard, wood, metal, glass, rubber products, roofing paper, and wallpaper
- Infectious materials and hospital or laboratory wastes authorized for disposal to land by official agencies, charged with control of plant, animal, or human disease.
- Highly flammable or pyrophoric materials

Agricultural Origin

- Plant residue from the production of crops including but not limited to stalks, vines, green drops, culls, stubble, hulls, lint, seed, roots, stumps, prunings, and trimmings.
- Manures
- Dead animals or portions thereof
- Adequately cleaned pesticide containers

GROUP 3 WASTES

Group 3 wastes consist entirely of nonwater soluble nondecomposable inert solids. Examples include but are not limited to the following:

- Construction and demolition wastes such as earth, rock, concrete, asphalt paving fragments, inert plastics, plasterboard, and demolition material containing minor amounts of wood and metals
- Industrial wastes such as clay products, glass, inert slags, asbestos, inert tailings, and inert plastics.

APPENDIX II
Classification of Waste Disposal Sites
(State Water Resources Control Board)

CLASS I DISPOSAL SITES

Those sites at which complete protection for the quality of ground and surface waters and public health and wildlife resources is provided for all time from waste deposited therein. These sites are designated as capable of accepting for disposal Groups 1, 2, and 3 wastes. The following criteria must be met for qualification as Class I.

- Geological conditions are naturally capable of preventing vertical hydraulic continuity between liquids and gases emanating from the waste in the site and usable ground or surface waters.
- Geological conditions are naturally capable of preventing lateral hydraulic continuity between liquids and gases emanating from wastes in the site and usable ground or surface waters, or the disposal area has been modified to achieve such capability.
- Underlying geological formations which contain rock fractures or fissures of questionable permeability must be permanently sealed to provide a competent barrier to the movement of liquids or gases from the disposal site.
- Inundation of disposal areas shall not occur until the site is closed in accordance with requirements of the regional board.
- Disposal areas shall not be subject to washout.
- Leachate and subsurface flow into the disposal area shall be contained within the site unless other disposition is made in accordance with requirements of the regional board.
- Sites shall not be located over zones of active faulting or where other forms of geological change would impair the competence of natural features or artificial barriers which prevent continuity with usable waters.
- Sites made suitable for use by man-made physical barriers shall not be located where improper operation or maintenance of such structures could permit the waste, leachate, or gases to contact usable ground or surface waters.
- Sites which comply with the aforementioned items but would be subject to inundation by a tide or a flood of greater than 100-year frequency may be considered by the regional board as a limited Class I disposal site.

CLASS II DISPOSAL SITES

Those sites at which protection to ground and surface waters and public health and wildlife resources is provided from Groups 2 and 3 wastes.

Class II-1 sites are those overlying usable groundwater, and natural geologic conditions are capable of preventing hydraulic continuity between liquids or gases and usable water, or the disposal site has been modified to achieve such capability.

Class II-2 sites are those having hydraulic continuity with usable groundwater but geologic and hydraulic features assure protection of water quality. Such features might include soil type, artificial barriers, or sufficient depth of groundwater.

The following criteria must be met for qualification as Class II:

- Disposal areas shall be protected by natural or artificial features so as to assure protection from any washout and from inundation which could occur as a result of tides or floods having a predicted frequency of once in 100 years.
- Surface drainage from tributary areas shall not contact Group wastes in the site during disposal operations and for the active life of the site.
- Gases and leachate emanating from waste in the site shall not unreasonably affect groundwater during the active life of the site.
- Subsurface flow into the site and the depth at which water soluble materials are placed shall be controlled during the construction and operation of the site to minimize leachate production and assure that the Group 2 waste materials will be above the highest anticipated elevation of the capillary fringe of the groundwater. Discharge from the site shall be subject to waste discharge requirements.

CLASS III DISPOSAL SITES

Those sites at which protection to water quality is provided from Group 3 wastes by location, construction, and operation which prevent erosion of deposited material.

LIQUID WASTES (SEWERS)

Description

The Mei Lun Yuen Project will be provided sewer service by the City of San Francisco which has a combined sanitary and storm sewer collection system.

The existing City sewer on Sacramento Street which will serve the Project is a 21-inch vitrified clay pipe (VCP) which has a capacity of 64 cubic feet per second (cfs) or 41.4 million gallons per day (MGD). This 21-inch sewer was completed in 1970 to Stockton Street where it discharges to a 3 x5 feet brick sewer to Sansome Street. There it connects into the 8.5 feet diameter North Point Main flowing to the North Point Sewage Treatment Plant (NPSTP).

The City sewer system from the Project to the Plant has adequate capacity as indicated by the City to accommodate the estimated 0.05 mgd average daily sewage flow from the Project. It was designed to handle combined storm and sanitary sewage flows (wet weather) for five-year storms.

Capacity for storm water on the City sewer system is discussed elsewhere in this Environmental Impact Statement under Hydrology and Flood Drainage.

Proposed Sewage Collection System

Sanitary sewage from the residents in the Project is estimated to average 0.05 mgd based on a total of 175 dwelling units with a total population estimated at 384 persons generating 125 gpd per person (gpcd).

The sanitary sewage will be collected in the combined sewer system and discharged with the storm water through two sewer laterals one from Building D and one from the lower structure into the 21-inch city sewer on Sacramento Street. Final design plans of building sewers are not yet completed. These will be reviewed for acceptability when detailed construction plans are submitted to HUD for approval.

Two sewer laterals are proposed to serve the Project connecting into the 21-inch city sewer on Sacramento Street. The Building D sewer should be a minimum of 6-inch diameter rather than the 4-inch proposed. The Tower sewer should be a minimum 8-inch diameter.

The 41.4 mgd capacity of the 21-inch City sewer on Sacramento Street is adequate for the sanitary sewage from the Project as are the 3 x 5 feet sewer on Sacramento Street from Stockton to Sansome Streets and the 8.5 feet diameter North Point Trunk Main on Sansome to the NPST Plant.

Summary of San Francisco Sewage Treatment Facilities

The City and County of San Francisco has formulated a program to correct deficiencies in its sewage collection and treatment system. These deficiencies, which result in contamination of the City's beaches and pollution of receiving water near the system's many points of discharge, have received the attention of the Regional California Water Control Board; and as a result, several orders to Cease and Desist these polluting activities have been issued.

In response to these orders, the City has prepared the San Francisco Wastewater Management Master Plan (SFWWMMP). The Master Plan includes a series of timed construction projects which will incrementally provide improved treatment and expanded capacity for the City's waste water flows.

An updated schedule for improvements is given below. A summary of the schedule for Stage I improvements is as follows:

Element	Cost ($ mil)	Estimated Completion Date
Southeast Plant Solids Handling	10.0	6/80
Richmond-Sunset Plant Interim Improvements	0.2	7/78
Southeast & North Point Interim Improvements	1.4	6/80
Pilot Plant & Toxicity Studies	1.7	6/74
Transport System-North Point-east	23.5	6/78
Southeast Primary Plant Expansion	24.7	6/80
Secondary Facilities for South-east Flow	28.0	6/80
Secondary Facilities for North Point Flow	36.0	6/80
Lake Merced 2-Mile Outfall	30.0	4/81
Westside Transport System	140.0	1/80
North Shore Wet Weather Transport (Transport to North Point & Southeast)	120.0	1/80
Total	$415.5	

General Description of City Sewage System

Improvements have been made to the City's sewerage system by the construction of three sewage treatment plants and a collection system consisting of interceptor sewers and pumping stations to intercept the dry weather flows which were discharging to the Bay and Ocean through shoreline outfalls. Because of cost considerations, the treatment plants and intercepting systems were originally sized for dry weather flow and a rainfall rate of approximately 0.02 inches per hour. At that time, it was not considered necessary to design for a larger fraction of storm water based on the concept that the early portion of storms flushed a high percentage of sanitary matter in the sewers and that what overflowed was a dilute mixture containing a small percent of sanitary flow. Massive treatment facilities would have been required to treat the runoff at the high rates generated during storms.

During periods of light rainfall (approximately 0.02 inches per hour), the system operates essentially as in dry weather except for increases in flow. As a result, approximately 32% of the yearly runoff is treated. During heavier rainfall periods, however, when rainfall exceeds 0.02 inches per hour, the flow in the combined sewer system exceeds the 250 MGD hydraulic capacity of the three treatment plants. The excess combined wastewater flow is discharged untreated from 39 outfall structures located around the periphery of the City. In an average year, approximately 82 overflows occur. Although the duration of the overflow period is small--about 2.4 percent of the time in an average year--water quality and beach conditions are affected for days after each overflow. Generally, these overflows cause deposits of waste material on the beaches throughout the winter months.

Wastewater flows from San Francisco in the amount of 36.5 billion gallons per year from domestic and industrial sources and 8.8 billion gallons of storm runoff, totaling 45.3 billion gallons, constitute the annual water mass to be controlled prior to discharge. Of this total, 39.3 billion gallons (bg) are now treated annually and 6 bg overflow directly to receiving water without treatment.

San Francisco receives an average of 20.33 inches of rainfall annually as based upon 62 years of records at the USWB Federal Office Building gauge. On the basis of the 24,500 acres of sewer service area in the City and assuming a runoff cofficient of 65%, there are 8.8 bg of runoff derived from the 20.33 inches of rainfall. Of this amount, about 2/3 drains to the Bay and 1/3 drains to the Ocean. The existing system diverts about 2.8 bg of the total 8.8 bg (approximately 32%) to treatment. The remaining 6 b.g. overflows with approximately 4 b.g discharging to the Bay and the remaining 2 b.g discharging to the Ocean.

The basic concept of the Master Plan, developed as an overall solution to the water pollution problems facing the City, is to provide a higher degree of treatment, an increase in treatment capacity, and a storage system to attenuate storm runoff rates by temporarily storing the runoff for later treatment. This capability offers the opportunity to take full advantage of the total storage capacity in the system which might not otherwise be used due to spatial variations in rainfall and hence runoff.

Existing Sewage System

The existing combined sewerage system must transport, treat and dispose of both dry weather flows and combined wet weather flows. To function under the extreme ranges encountered under the dual regimen of wet weather conditions, the system was originally arranged and sized to accommodate the wet weather flow conditions primarily. Plate 1, following, shows a block diagram of the system.

The City is divided into three sewerage service areas, each of which is presently served by a primary sewage treatment plant.

The three plants are the North Point Water Pollution Control Plant, Richmond-Sunset Water Pollution Control Plant and Southeast Water Pollution Control Plant. The location of each of the plants and its outfall, together with the approximate area it serves, is shown on Plate 2. Within each service area of each plant are varied land uses and population densities.

For further details of the operational features of the SFWWMMP projects under design, the reader is referred to the San Francisco Wastewater Master Plan, Transport-Storage Operational Plan Report by Bureau of Sanitary Engineering Department of Public Works, City and County of San Francisco dated June 1976 from which this General Description has been extracted.

Sewage Treatment at North Point Water Pollution Control Plant (NPWPCP)

The North Point Water Pollution Control Plant serves an area of 7,500 acres. The tributary area includes residential, commercial and industrial land use areas. The plant now provides a chemical primary treatment consisting of pre-chlorination, screening, grit removal, preparation and primary sedimentation with chemical coagulation using ferric chloride and postchlorination. Combined sewage flows exceeding plant capacity when rainfalls exceed 0.02 inches per hour are bypassed directly to San Francisco Bay without any treatment at 17 locations. The primary effluent does not meet the National Pollution Discharge Elimination System (NPDES) and Regional Water Quality Control Board (RWQCB) discharge requirements.

PLATE 1

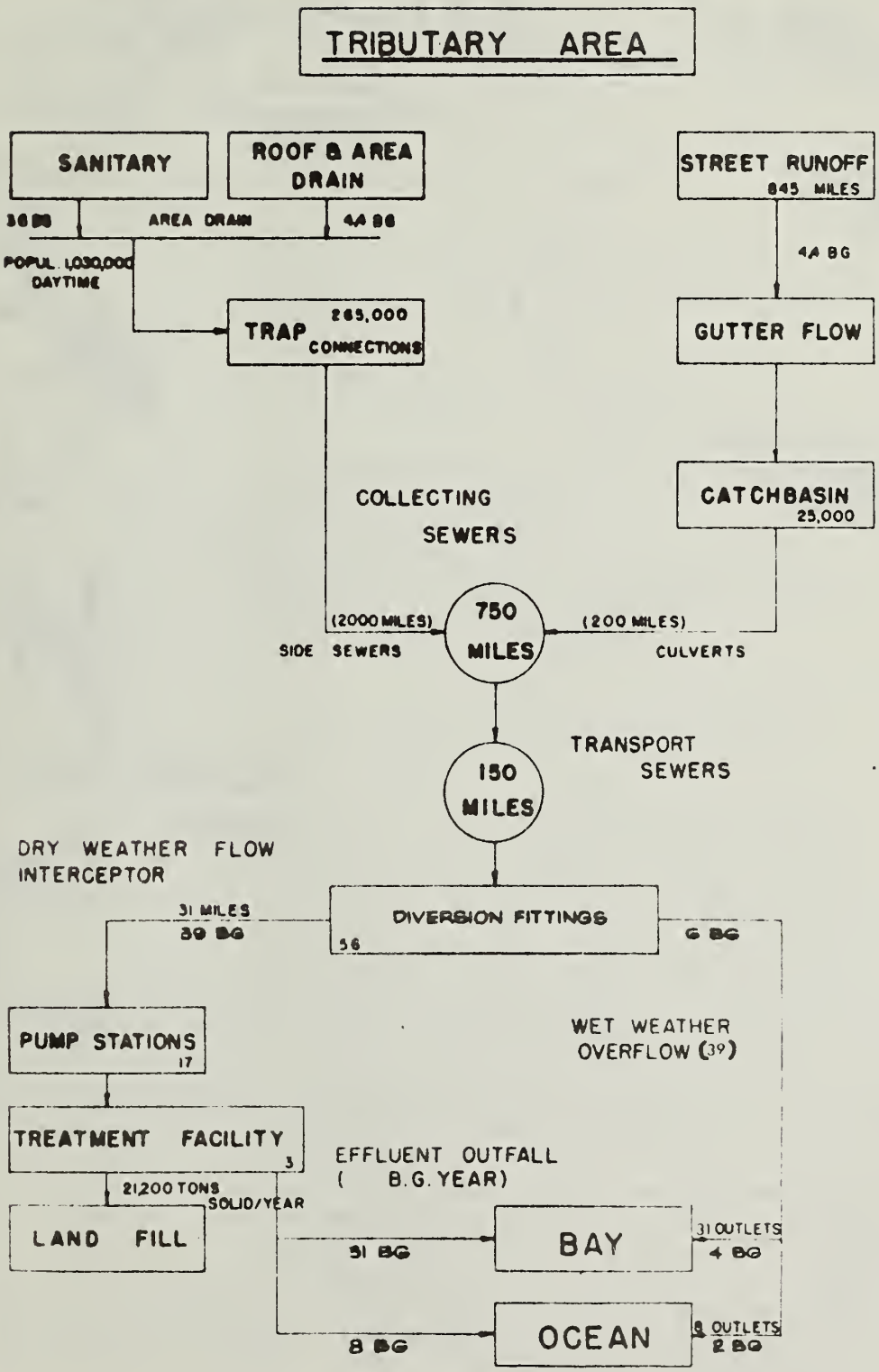
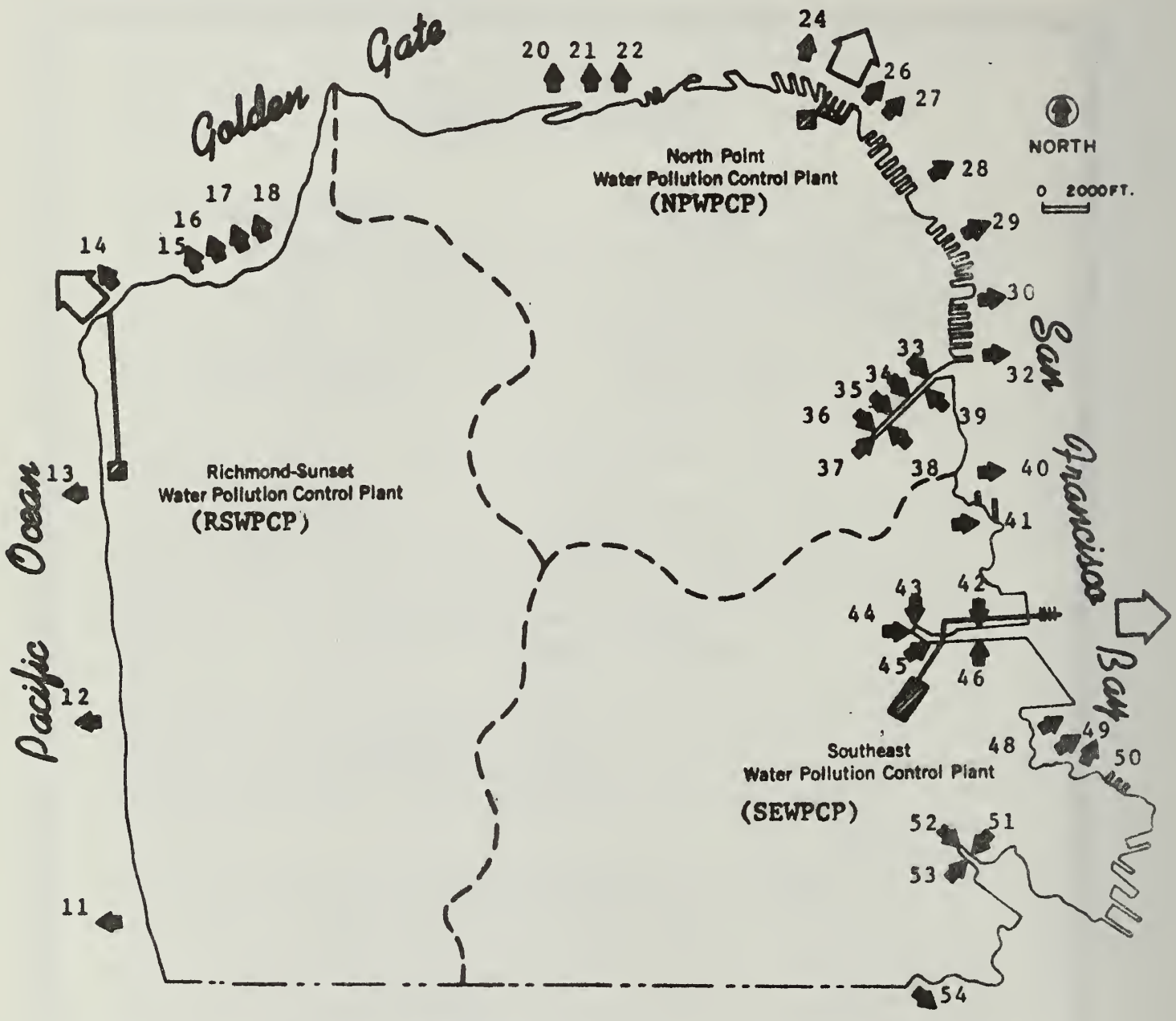

TRIBUTARY AREA
SANITARY
ROOF & AREA DRAIN
STREET RUNOFF
845 MILES
AREA DRAIN
POPUL. 1,030,000 DAYTIME
4.4 BG
TRAP
265,000 CONNECTIONS
GUTTER FLOW
CATCHBASIN
25,000
COLLECTING SEWERS
(2000 MILES)
SIDE SEWERS
750 MILES
(200 MILES)
CULVERTS
150 MILES
TRANSPORT SEWERS
DRY WEATHER FLOW INTERCEPTOR
31 MILES
39 BG
DIVERSION FITTINGS
56
6 BG
PUMP STATIONS
17
WET WEATHER OVERFLOW (39)
TREATMENT FACILITY
3
EFFLUENT OUTFALL
(B.G. YEAR)
21,200 TONS SOLID/YEAR
LAND FILL
31 BG
BAY
31 OUTLETS
4 BG
8 BG
OCEAN
8 OUTLETS
2 BG

PLATE 2

TREATMENT PLANTS AND OUTFALL LOCATIONS



Presently the City is divided into three drainage districts (indicated by the broken line) which follow the topographical features of the City. Each of the districts is served by a Water Pollutuon Contol Plant which provides primary treatment with chemical addition before discharge of the effluent through an outfall (represented by the large arrows). Located around the perimeter of the City are 39 bypass locations (represented by the solid arrows) where a combination of untreated domestic wastewater and stormwater overflow into the Bay and Ocean when rainfall exceeds 0.02 inches per hour. Overflows occur approximately 80 times per year.

Numbers adjacent to arrows represent the outfall system reference number which is keyed to Master Plan documents.

The NPWPCP (Plant) has a hydraulic capacity of 190 mgd and an effective capacity of 160 mgd. It processes an average dry weather flow of 60 mgd and after primary treatment discharges the effluent into San Francisco Bay.

Sewage sludge generated at the NPWPCP is treated at the City Southeast Water Pollution Control Plant after transport through a 10-inch force main. The treated sludge is transported under private contract to a disposal site in Mountain View, Santa Clara County.

Plans for Future Expansion of City Sewage Treatment in Bay Side Facilities

Plate 3 indicates the drainage area which is served by the Bay Side facilities, and Plate 4 indicates the areas served by each treatment plant at the present time.

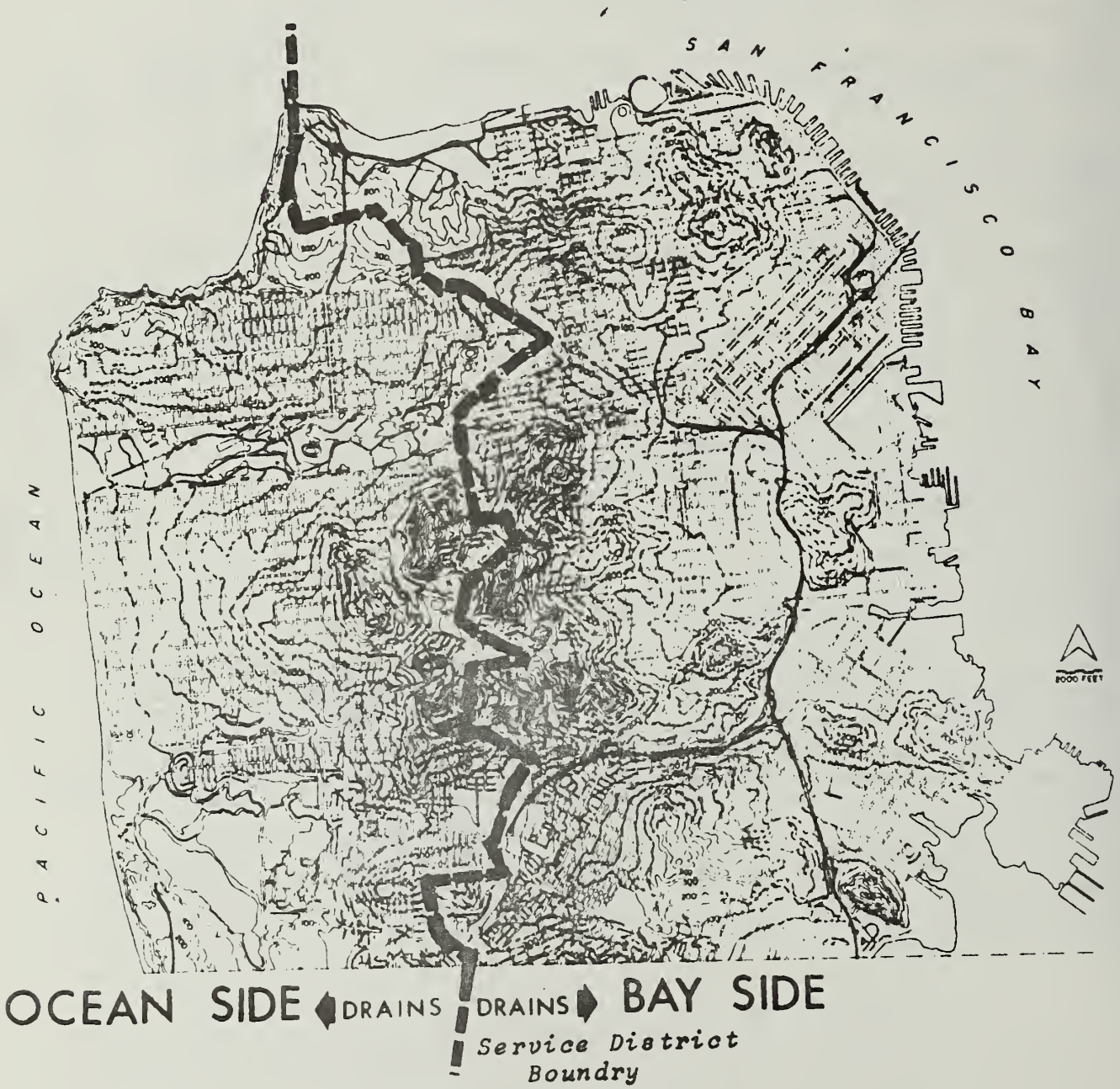
The major Bay Side projects as presently proposed, and as shown on Plate 5 are as follows:

1. North Point Crosstown Transport (NPX)
2. North Shore Outfalls Consolidation (NSOC)
3. Islais Creek Outfalls Consolidation (ICOC)
4. Channel Outfalls Consolidation (COC)
5. Southeast Plant Expansion and Interim Outfall (SEWPCP and IO)
6. North Point Wet Weather Plant Conversion (NPWWPC)
7. Sunnydale-Yosemite Transport-Storage (SYTS)
8. Hunters Point Basin
9. Mariposa Basin
10. North-South Crosstown High Level Transport-Storage (NSHL)
11. Real Time Automatic Control (RTAC)

Project (1) above, the North Point Crosstown Transport is currently under construction. Projects (2), (4) and (5) and a portion of (3) all as included in our present "Accelerated Program" and shown on Plate 5 are under design. Projects (6) through (9) are in the conceptual stage and require an Analysis of Alternatives before adoption as design projects. Project (10) is on the 1976-77 State Project list for Step 1 (Planning) funds amounting to $800,000. Project (11) is being investigated and implemented under separate Federal funding to provide solutions to wet weather control systems, and will apply to the North Shore System initially with subsequent expansion integrating system control on a City-wide basis.

PLATE 3

TOPOGRAPHIC MAP OF SAN FRANCISCO



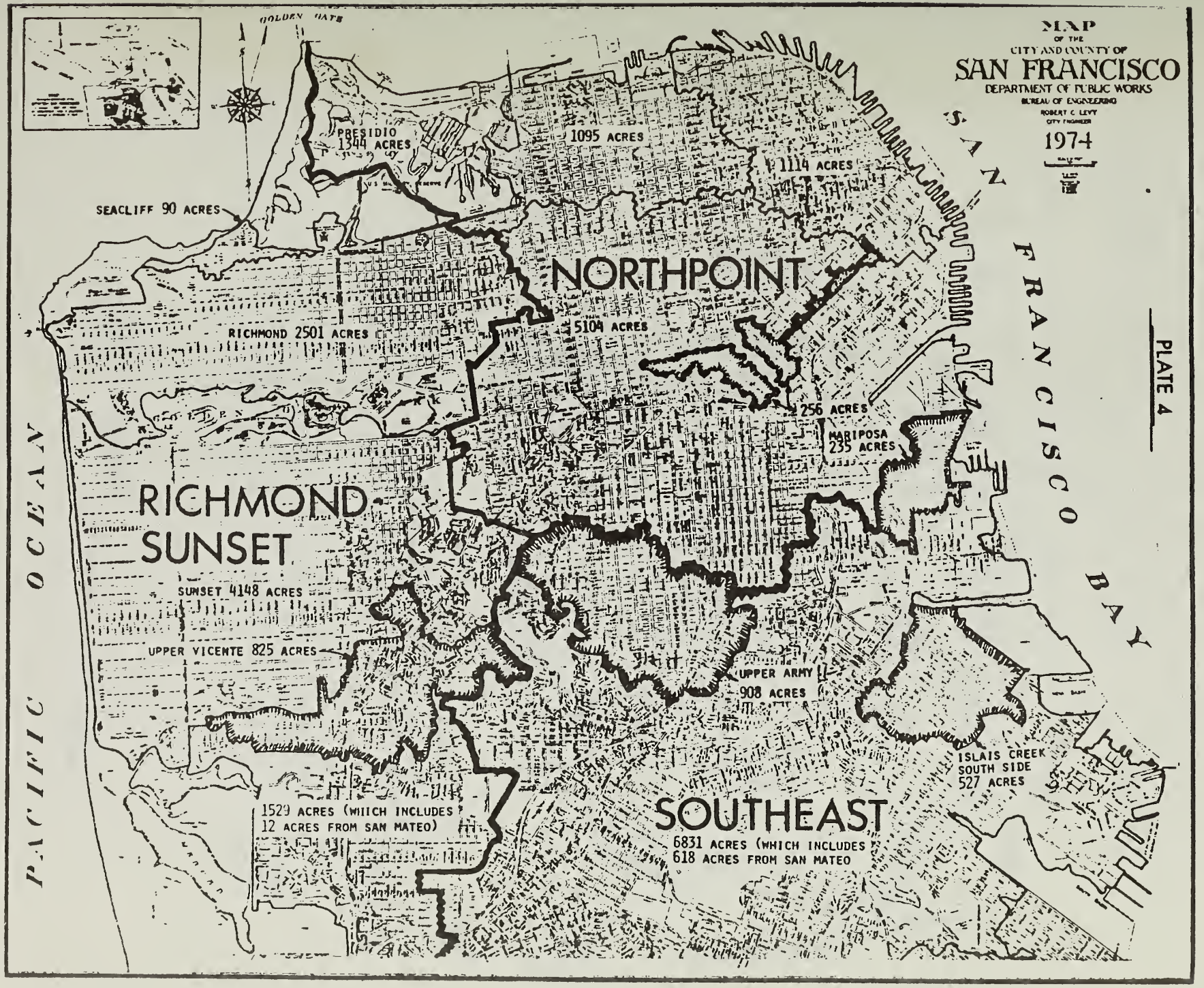
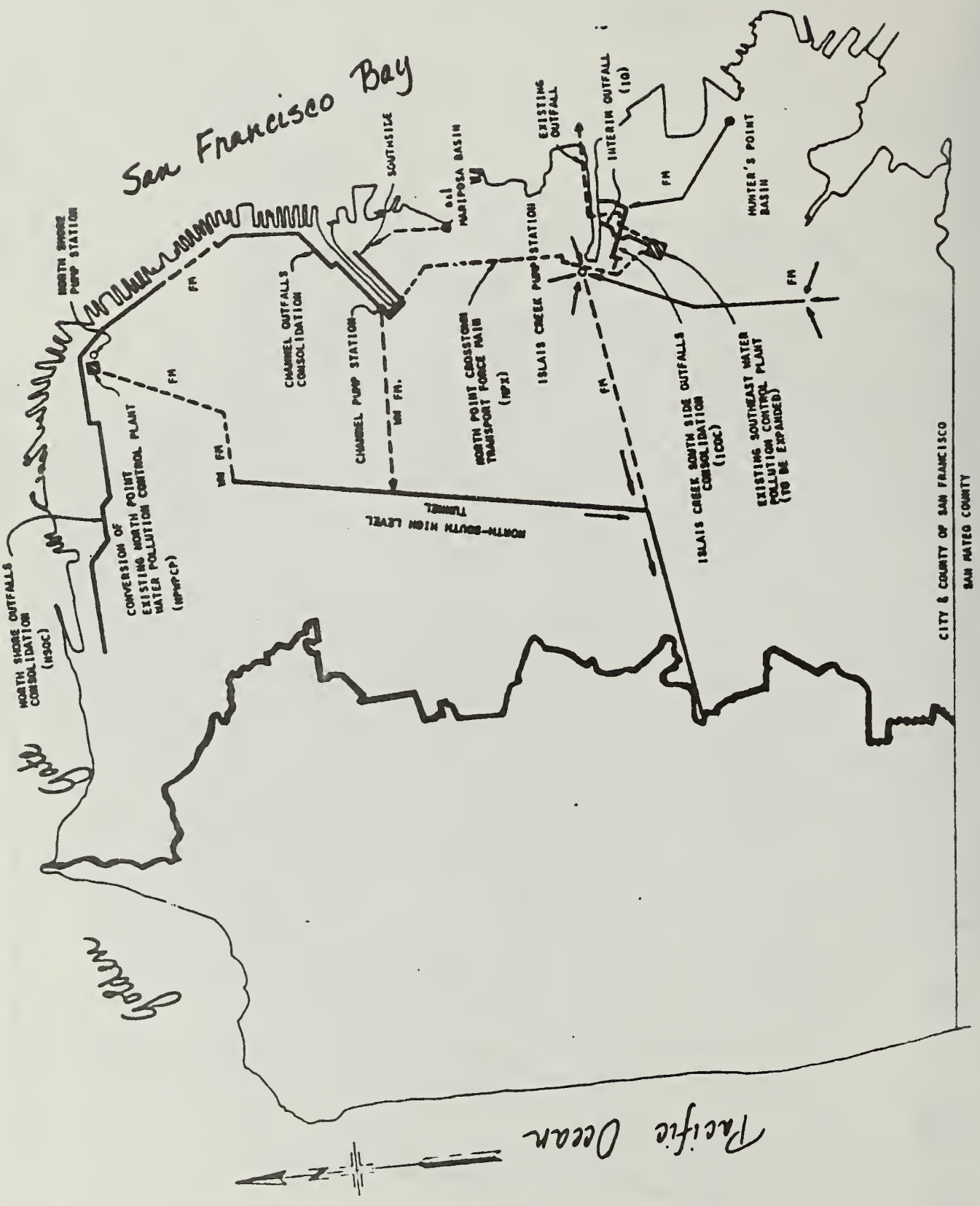

MAP
OF THE
CITY AND COUNTY OF
SAN FRANCISCO
DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENGINEERING
ROBERT C. LEVY
CITY ENGINEER
1974
PLATE 4
GOLDEN GATE
PRESIDIO
1344 ACRES
1095 ACRES
1114 ACRES
SEACLIFF 90 ACRES
NORTHPOINT
5104 ACRES
RICHMOND 2501 ACRES
256 ACRES
MARIPOSA
235 ACRES
RICHMOND
SUNSET
SUNSET 4148 ACRES
UPPER VICENTE 825 ACRES
UPPER ARMY
908 ACRES
ISLAIS CREEK
SOUTH SIDE
527 ACRES
1529 ACRES (WHICH INCLUDES
12 ACRES FROM SAN MATEO)
SOUTHEAST
6831 ACRES (WHICH INCLUDES
618 ACRES FROM SAN MATEO
PACIFIC OCEAN
SAN FRANCISCO BAY

PLATE 5


San Francisco Bay
Pacific Ocean
NORTH SHORE PUMP STATION
FM
CHANNEL OUTFALLS CONSOLIDATION
CHANNEL PUMP STATION
SOUTHSIDE
MARIPOSA BASIN
EXISTING OUTFALL
INTERIM OUTFALL (10)
HUNTER'S POINT BASIN
NORTH POINT CROSSTOWN TRANSPORT FORCE MAIN (MP2)
ISLAIS CREEK PUMP STATION
NORTH-SOUTH HIGH LEVEL TUNNEL
CONVERSION OF EXISTING NORTH POINT WATER POLLUTION CONTROL PLANT (NPWPCP)
NORTH SHORE OUTFALLS CONSOLIDATION (NSOC)
ISLAIS CREEK SOUTH SIDE OUTFALLS CONSOLIDATION (ICOC)
EXISTING SOUTHEAST WATER POLLUTION CONTROL PLANT (TO BE EXPANDED)
CITY & COUNTY OF SAN FRANCISCO
SAN MATEO COUNTY

Further details of plans for expansion of Bay Side City Sewage Treatment facilities can be found in the San Francisco Wastewater Master Plan, Transport-Storage Operational Plan Report by Bureau of Sanitary Engineering, Department of Public Works, City and County of San Francisco dated June 1976 from which this summary was extracted.

Acceptability of Sewage Treatment to Regulatory Agencies

On May 18, 1976 by order 76-78, the California Regional Water Control Board, San Francisco Bay Region, prohibited additional discharges to the sewer system tributary to the North Point Plant by dischargers who did not discharge prior to May 18, 1976.

This prohibition allowed for the execlusion of projects under construction or with building permits issued or projects for which the city had received and completed processing of all documents required by the city for issuance of a building permit before May 18, 1976.

This Order 76-58 amended Order 76-4 requiring the city to cease and desist from discharging wastes contrary to requirements prescribed in Order 74-162, an NPDES Permit and in Resolution 70-16. It was issued after the Board concluded that the city was failing to show substantial progress and accomplishments concerning five factors including:

1. Continued violation of effluent organism requirements.
2. Lack of compliance with time schedules for facilities to provide primary and secondary treatment.
3. Compliance with time schedules for facilities to provide expanded primary and secondary treatment.
4. Progress toward effective implementation of the State Water Resources Control Board - EPA Assessment Team Recommendations.
5. Progress toward review of operation and maintenance of the sewage collection system.

Additional discharges to the City sewer system were prohibited. The prohibition was amended to allow partial removal and permit additional discharges when the city would demonstrate to the Board that they have completed tasks specified in six sections of the Order 76-58.

In July 1976 the Board allowed the city to issue another 46 new building permits for new construction based on progress made in developing and implementing a waste management program to insure the timely completion and operation of those Wastewater Master Plan facilities needed to comply with all NPDES requirements.

Other required Interim Measures are expected to be completed in August 1976. A financial program necessary for planning, design, construction and operation of all facilities needed to comply with this order in the shortest practicable time are expected to be completed in September which is expected to result in continued further lifting of the prohibition and allow the city to continue issuing building permits.

Major progress was considered to have been made when the San Francisco Board of Supervisors placed a $240 million sewer improvement bond on the ballot for November 1976.

Potential Impacts

1. Environment on the Project. None

2. Project on the Environment.

   A) Minor, long-term, negative impacts on the City sewage system will result with the construction of the Project from the estimated sewage flow of 0.05 mgd entering the 21-inch City sewer on Sacramento Street and the North Point Water Pollution Control Plant (NPWPCP).

      The estimated sewage flow of 0.05 mgd constitutes 0.12% of the 41.4 mgd capacity of the Sacramento Street Sewer and 0.03% of the 160 mgd effective treatment capacity in the NPWPCP. It constitutes 0.08% of the 60 mgd average dry weather flow in the NPWPCP. These impacts are considered of minor significance.

   B) A minor, short-term negative impact on existing residents in the Project area may be expected during construction of the sewers to serve the project.

Mitigation of Significant Impacts

None recommended.

PUBLIC SERVICES

1. Fire

No adverse effect on the resources and capabilities of the San Francisco Fire Department is anticipated as a result of this Project.

The tower will be constructed in accordance with Type I classification of the San Francisco Building Code, the most fire-resistant construction classification in the Code. Sprinklers will be provided by the developer as required. These measures will minimize potential life hazard in the proposed Project.

The following is quoted from a letter from Gerald K. Lee of Architects Associated: "During the schematic stages of the design, many alternatives were proposed to satisfy the Fire Department requirements for establishing the Plaza level as datum. The only solution acceptable to the Fire Department allows equipment and water trucks access to the deck so that ladders might be rigged against the family buildings. Egress for the fire trucks is also mandatory and a clear turn around on the Plaza is the only solution because Pratt Place and Joice Street are not wide enough for the Fire Department trucks." "The fire truck ramp, a one-foot change of grade from sidewalk level" (on Sacramento Street) "to the Plaza level, is also the main pedestrian way to the project, and can easily be closed off (with removable posts) to any vehicles except in the case of fire." The fire truck turnaround on the Plaza level is shown on the plan of Architects Associated.

The Fire Department has several stations in the immediate area which would respond to a first alarm fire in Chinatown: Station #2 at 1340 Powell Street; Station #13 at 530 Sansome Street and Station #28 at 1814 Stockton Street, Engine companies would also be called in from other parts of the city if needed.

2. Police

For police protection, the project area is served by Central Station at 766 Vallejo Street, six blocks from the site.

The crime rate for the project area in April 1974 was one incident per year for every 16 persons. The Police Department is converting to a new system of computation for crime rate figures and more recent figures for this small area are impossible to isolate from the Central Station statistics, which cover a wide geographical area. According to a Police Department spokesman, there has been a 35% increase in crime in San Francisco within the past year. Therefore, if we apply this City-wide increase to the Project area, a rough figure for the yearly crime rate might be assumed to be close to one incident for every 11 persons.

The Police Department earlier made recommendations for crime prevention features to be included in the design of the Project. These include: Deadbolt locks; solid wood entry doors; recessed corridor lighting devices with locking screws; exterior elevator lobby visible from the street; no internal hallways; wrought iron railings (for better visibility); secured garage facilities; individually keyed mailboxes; utilization of a central courtyard for laundry facilities and play area. The developer will incorporate into the design of the buildings all of the Police Department recommendations.

A spokesman for Architects Associated has said that in addition to these features, the developer has tried to make the Project visually open to the street and to the view of others living within the Project. Visitors to the tower for the elderly will be controlled from a desk in the lobby. There will be an intercom system in the tower. Windows will expose the hallways to the outside. These design features, built into the Project, should maximize the safety of the residents.

Conclusion: No adverse effect on police facilities or resources is expected to result from the Project.

3. Medical Services

Health facilities which would most likely be patronized by the residents of the Project include the following:

- District Health Center #4, 1490 Mason at Broadway operated by the San Francisco Department of Public Health. This facility serves the entire district bounded by Van Ness Avenue and south of Market. Offers preventive medical services, including health education, information and referral, public health nursing, school health program, mental health consultation, immunization, family planning program, cancer screening and dentistry for children. Has some bilingual staff.

- Northeast Medical Center (NEMS) at 615 Grant Avenue is funded by HEW, Medical and Medicare. Has some 7300 active registered patients, about 90% of whom are from Chinatown. Formerly subsidized through State for poverty level, it now charges on a sliding scale. Offers comprehensive medical and basic dental programs on outpatient basis with clinics and some lab work. For serious matters, referrals are made to hospitals: Chinese Hospital, University of California Medical Center and San Francisco General. Chinatown and North Beach are the target area for this facility.

- Northeast Mental Health Center at 1548 Stockton Street is supported by Federal, State and City funds. It has about 400 active patients, 13 years or older. Provides outpatient and outreach services. Home visits are made if necessary. Chemotherapy treatment is given. Serves mostly Asians, about 50% from Chinatown.

Branches, supporting teams of the Northeast Mental Health Center are as follows:

a) Chinatown Community Care (formerly the Northeast Community Mental Health Day Treatment Center) at 799 Pacific Avenue. Provides group care of a short-term nature to some 130 patients, adults 18 or over.

b) Chinatown Aftercare at 615 Grant Avenue has 75 adult clients on its active list. These are mostly chronically and Long-term ill. This center works in conjunction with Napa State Hospital. It provides day treatment in a group program.

Two services with a specialized clientele are:

- Chinatown-North Beach Family Planning Services, Inc. at 511 Columbus Avenue provides an eductional program for all ages and a clinical program (a workload of about 85 weekly) for 25 years and under; between 70 and 75% are Chinatown residents.

- On Lok Senior Citizens Program, funded mostly by HEW, operates a center at 831 Broadway which provides comprehensive program for care of the elderly, including day care (with medical orientation) transportation to services needed, occupational therapy and a meal program to about 150 clients.

4. Hospitals

The hospital most apt to be patronized by residents of Mei Lun Yuen is Chinese Hospital at 835 Jackson Street. It is funded by Chinese family associations with fees on a sliding scale. It has a 60-bed capacity. As has been mentioned earlier, some patients, especially those with serious illnesses, may also be referred to the University of California Medical Center or San Francisco General Hospital.

5. Ambulance Service

San Francisco is one of very few cities that owns and operates its own ambulance service, which is available free to all residents. The Police and Fire Departments radio emergency service for an ambulance when there is a need for one.

Conclusion: Although most of the medical facilities described above are operating at or near capacity, it is not estimated that the Chinatown Project (because of its relatively small size) will cause any significant negative impact on them.

WATER SUPPLY

Description

The Mei Lun Yuen project is expected to have an estimated population of 384 persons at full occupancy. Based on an average daily water use reported for this area of San Francisco of approximately 125 gallons per capita per day, the water consumption from the project is estimated to be 48,000 gallons per day or 0.048 million gallons ger day (MGD) rounded to 0.05 MGD.

Water service will be provided by the San Francisco Water Department (SFWD) through their City Distribution Division from the Lombard Reservoir which has a total capacity of 2.7 million gallons (MG). This reservoir is located at Greenwich and Hyde Streets, 1 1/4 miles north-west of the project at an elevation of 306 feet.

Water Service Facilities

Water service to the project will be provided from the existing 6-inch cast iron main in Sacramento Street at elevation 160 feet (approximately). Pressure in the main, furnished by gravity from the Lombard Reservoir is a maximum of 58 pounds per square inch (psi).

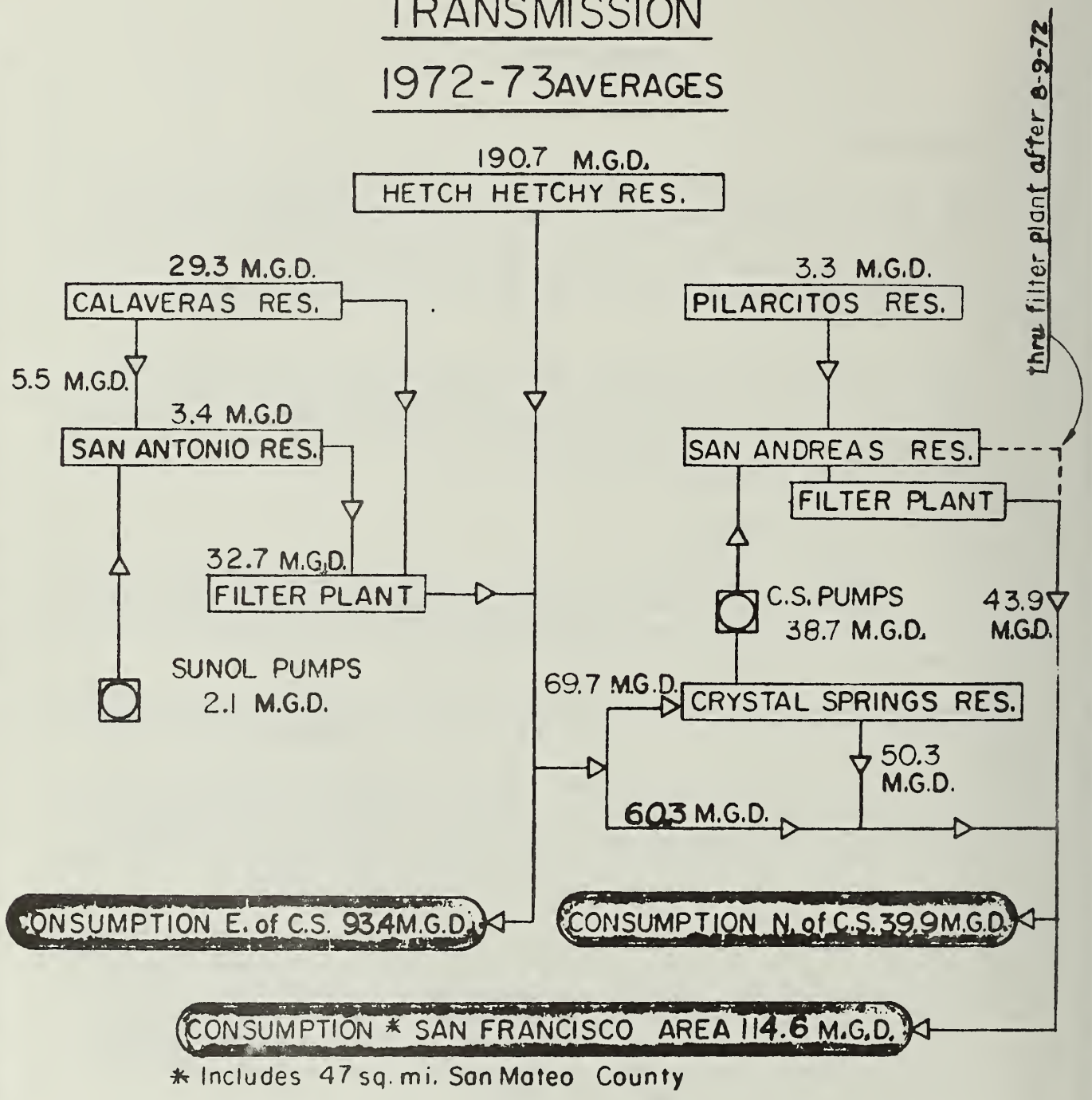
Booster pumps and storage facilities will be required to provide minimum 25 psi pressure in the 13 story tower with top elevation of 265 feet.

Detailed design plans of the water supply approved by the City Water Department will be required for review to determine acceptability. An existing 18-inch diameter water main is also available in Sacramento Street to provide fire fighting capability. This water system is owned and operated by the San Francisco Fire Department (SFFD).

The SFFD shall provide assurance that water supply facilities are adequate to meet their requirements establishing flows for a primary fire of 5000 gallons per minute (gpm) and a simultaneous secondary fire of 2500 gpm. Final design and construction of the water system will have to meet requirements of the San Francisco Water Department and Fire Department for water service which must be adequate for both domestic and fire fighting purposes to supply the project.

All services are to be metered by SFWD to each dwelling unit in the project.

FIGURE 1



TOTAL SUBURBAN	133.3	M.G.D.
SAN FRANCISCO	114.6	M.G.D.
SYSTEM TOTAL	247.9	M.G.D.

Description of Water Supply by SF Water Department

Water is supplied to the Lombard Reservoir by gravity from the Sunset Reservoir at elevation 385 feet. Capacity of the Sunset Reservoir is 176 million gallons (mg).

Water is supplied to the Sunset Reservoir by the Lake Merced Pumping Station fed by gravity from Lower Lake of Crystal Springs Reservoir.

The Hetch Hetchy aquaduct system from the Tuolumne River in the Sierra Nevada Mountains is the primary source of supply to Crystal Springs Reservoir.

Figure 1 indicates the total water transmission of the SFWD for 1972-73. Over 75% of the water supply shown delivered to consumers in Alameda, Santa Clara, San Mateo and San Francisco City and County was imported from Hetch Hetchy reservoirs on the Tuolumne River in the Sierras. The balance is from Bay Area sources. The total average water consumption for the San Francisco area in 1972-73 was 114.6 MGD and for San Francisco County was 96.7 MGD.

Water supplied by SFWD receives continuous disinfection by chlorination throughout the year with no water exposed to contamination from the point of final chlorination to the consumer's services. The Lombard Pump chlorinates water supplied from Lombard Reservoir to the mains supplying the project. All new distribution mains in the City are required to be disinfected before they are placed in service.

Quality of the Water Supply

Chemical and bacteriological quality of the water supplied by the SFWD from the Lombard Reservoir meets California State Department of Health and United States Public Health Service Drinking Water Standards. The SFWD provides water supply under permit from the California State Department of Health who routinely monitors the quality of water service. The SFWD operates under jurisdiction of the California State Public Utility Comission who assures the continuity of service at reasonable rates required by HUD for acceptable water Service.

Anticipated Impacts

1. Environment on the Project. None

2. Project on the Environment.
   A minor, long-term, negative impact on the San Francisco Water Department water supply from Lombard Reservoir can be expected. The average daily water demand of the Project is 0.05 mgd or 1.85% of the 2.7 mg capacity of the Lombard Reservoir. An even less minor long-term, negative impact can be expected to be caused by the Project water demand of 0.05 mgd on the total SFWD water supply facilities. The 0.05 mgd water demand from the Project constitutes 0.05% of the 96.7 mgd average daily water consumption for San Francisco County served by SFWD for 1972-73.

Mitigation of Potential Adverse Impacts

1. The water demand of the Project is not considered to be of significant impact on the SFWD water supply facilities to recommend mitigating measures be taken.

2. Adverse impacts on the environment during construction of the water supply facilities connecting to existing water mains in Sacramento Street can be mitigated by coordination of construction between the builder and the SFWD and supervision and inspection of work by the City Building Department to abate construction impacts.

SOILS - GEOLOGY - SEISMIC

SOILS

This site is roughly rectangular in shape. The ground surface slopes downward and northeasterly from Elevation 180 near southwest corner to 130 feet near the northeast corner. The northern end of the Stockton tunnel extends nearly 1/3 of the eastern property boundary.

The surface coils encountered by the soils investigation of Geotechnical Engineers in August 75 were generally 2-16 feet of medium dense sandy fill overlying alluvial deposits. This fill contains bricks and other debris. The alluvial deposits consist of salty sand and plastic silty-sandy clay. Four borings from depths of 29 to 51 feet were drilled to samples underlying materials. Locations of these borings were made as shown on Figure 1.

The alluvial deposits grade into graywacke sandstone and shale. Only graywacke sandstone is encountered in Borings 1 and 2 to the maximum depths explored of 29.5 and 34 feet. Below a depth of 5 to 22 feet of surface soil deposits encountered in Borings 3 and 4, massive, weathered, and relatively hard but fratured graywacke sandstone is encountered to depths of 49.5 and 33.5 feet. Below these depths, highly sheared, gray to black shale and graywacke sandstone are encountered to the maximum explored depths of 51.1 and 50 feet. An interpretive subsurface profile taken along the section indicated on the attached Site Plan is shown on Figure 2.

The bedrock strata are believed to dip at an angle of 40 to 45 degrees to the northeast in accordance with the panar elements observed in the cored samples and with the regional data.

Free ground water was encountered in two borings at depths of 6 and 25 feet.

There has been much published soils and geological data in previous developments in the vicinity of this site. This data is available from the City Planning Commission with some of the developments as follows:

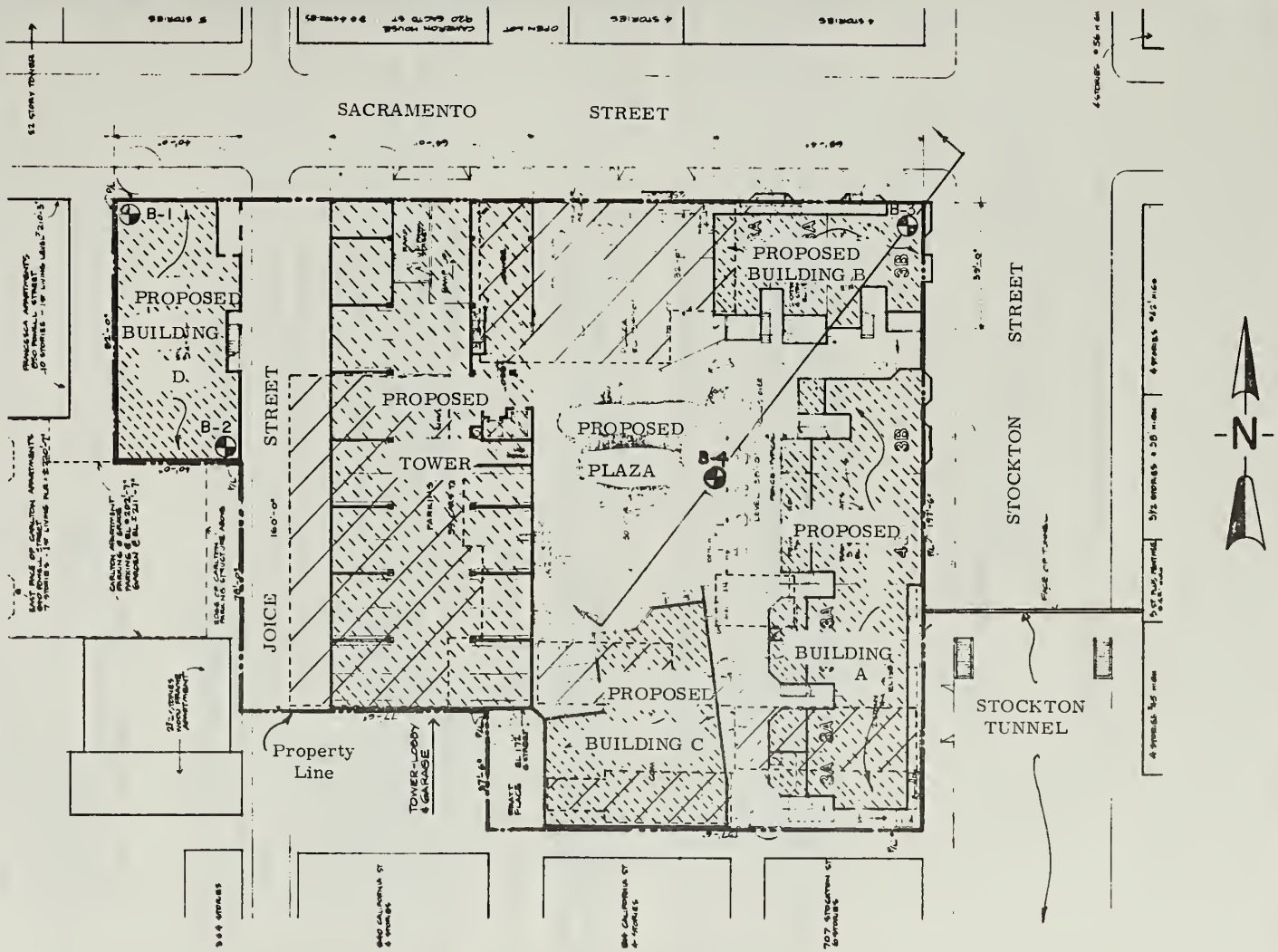
(1) Stockton Tunnel
(2) Fairmont Tower on Powell
(3) Portola Tower - 980 Sacramento Street
(4) Carson House structure - 920 Sacramento Street
(5) Condominium - 714 Stockton Street.
(6) Royal Standard Court Hotel on Powell

Experience of these developments indicates the following.

LEGEND

- B-4 APPROX. BORING LOCATIONS
- PROPERTY LINE
- EXISTING BUILDING

REFERENCE: LANDSCAPE PLAN
PREPARED BY
ARCHITECTS ASSOCIATED
DATED 6-30-75
SCALE: 0 50 (FEET)



SITE PLAN

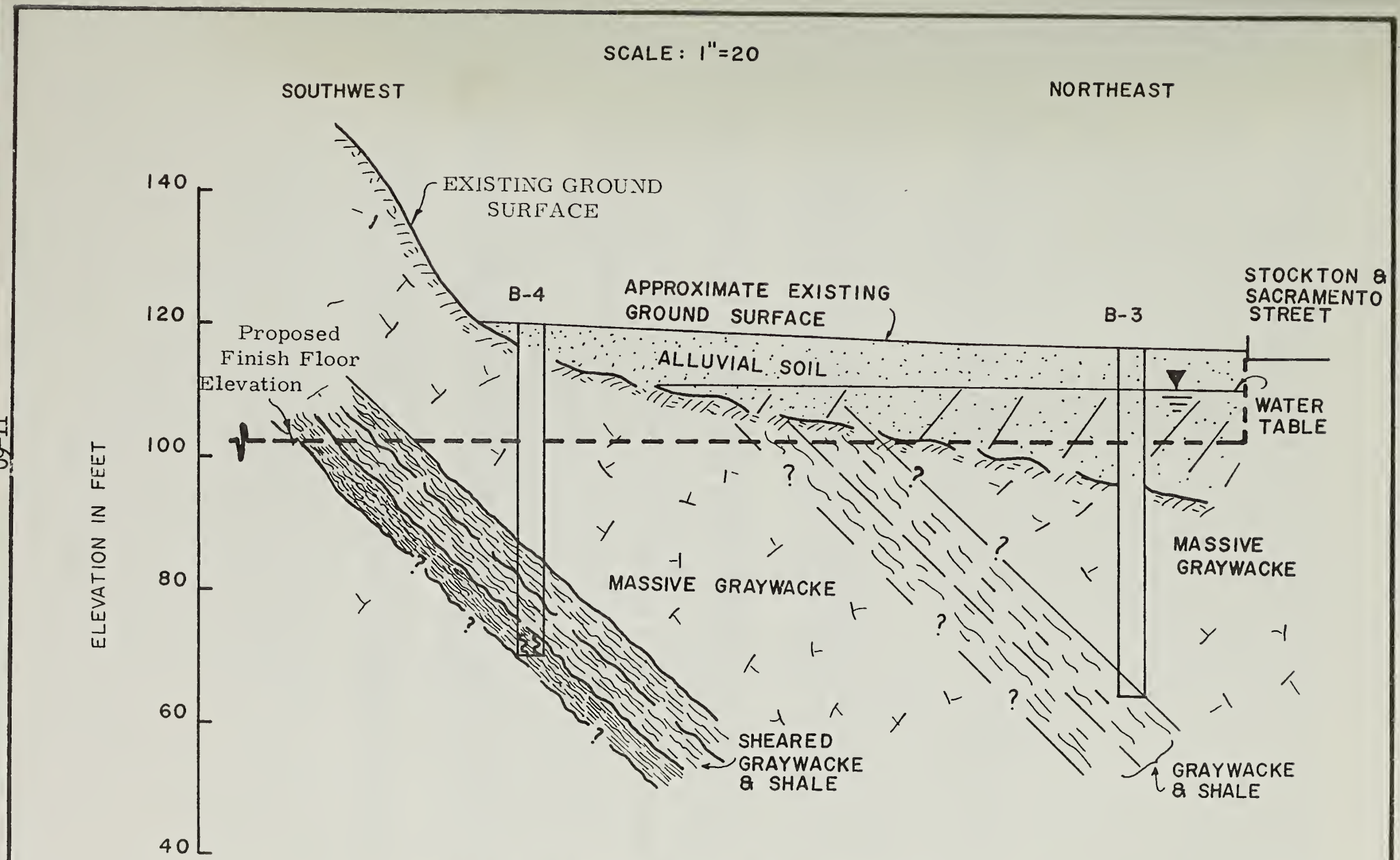
PROJECT 102-1

ASSOCIATED GEOTECHNICAL ENGINEERS

II-59

AUGUST, 1975

FIG. 1



INTERPRETIVE GEOLOGIC CROSS-SECTION

PROJECT 102-1

ASSOCIATED GEOTECHNICAL ENGINEERS

AUGUST 1975

FIG. 2

Subsurface materials in the above-developed sites consist generally of fill, natural soil deposits and rocks of the Franciscan Formation, consisting sandstone and shale. These structures are supported on spread footings and/or caisson foundations. The rocks could be excavated by heavy ripping and backhoe equipment, supplemented by localized blasting. Vertical or near vertical excavations were made and made in a series of stages if adjoining buildings existed. Tie-back anchors were installed as excavations proceeded. Soldier beam with lagging system were used to provide temporary shoring. The rocks were generally divided into fractured and sheared ones for design and construction purposes. Surface bedrock contours could not be accurately evaluated. No unusual construction problems were encountered except for the construction of Stockton Tunnel.

On the basis of the soils data reviewed, the site is suitable for development but only under careful supervision of soils, geologic engineers and structural engineers. Construction will be in accordance with HUD Handbook 4140.3 change 1, 4140.1 and 4541.1 and the applicable MPS.

Soils Impacts

(1) The limited soil investigation discloses hetrogeneous fill materials over a large portion of the site. This material without further study should not be used as any table bearing material. This may require removal from the site.

(2) The low shear strengths and high compressible nature of the alluvium must be carefully controlled during construction or foundation problems will result.

(3) Ground water will be a problem unless carefully controlled.

(4) Seepage along bedding planes will require special foundation design.

(5) The placing of lightly loaded structures should not be allowed to be built partially on cut and partially on fill.

(6) The sandy clay materials found on this site are moderately expansive and construction must follow HUD Region IX standards for expansive materials dated September 1, 1975.

(7) All structural and non-structural retaining walls will require subsurface drainage protection to control moisture and eliminate high fluid pressures.

(8) Foundation designs will vary on the same buildings such as piling and spread footings. Anticipated loads and settlement must be carefully coordinated.

(9) Dust and siltation will exist during construction due to soil type and prevailing wind conditions.

(10) Rock faces will leave scars on the landscape which are almost impossible to eliminate.

GEOLOGY

The evolution of the San Francisco Bay region is characterized by a long, complex record of extensive earth movement and seismic activity. The area has been further complicated by sea level changes related to Pleistocene glaciation and erosion by running water. From a geologic point of view, the Bay Area is considered young.

Within the region are several major active faults capable of generating large magnitude earthquakes. For example, the San Andreas Fault is located to the west of the site and has produced an 8-plus magnitude earthquake in historic times (the 1906 earthquake). The Hayward Fault to the east is also active, and has originated large earthquakes and associated surface displacement (1886).

The site lies on the northeast flank of Nob Hill, a projecting mass of bedrock consisting of shale and graywacke sandstone of the Franciscan Formation. Although the rocks are not well exposed and the geologic structure is poorly understood, Nob Hill is one of a group of five hills composed of predominantly shale and sandstone. These hills lie northeast of a major shear or fault zone, termed the Fort Point - Potrero Hill - Hunters Point Shear Zone, as shown by U. S. Geological Survey. The rocks in the vicinity of the site are therefore more competent than those immediately to the southwest within the indicated shear zone.

On a more localized level, Nob Hill and its vicinity are on the southwest limb of a downfold or syncline termed the Columbus Avenue Syncline. The rock beds in the vicinity of the site trend or strike northwest-southeast and dip at a moderate to steep angles to the northeast.

Geological Impacts

1. Due to pressure of critical shear zones competence of rock for foundation should be established.

2. Due to the adverse orientation and dip of the bedding planes rock cut slopes will differ throughout the site. Designers must provide tie back anchor system which differ over the site. These are costly and must be carefully supervised by competent soils engineer.

Seismicity

The seismic hazard of the San Francisco area is great and well known, and seismic activity is high. All shear zones shown on Figure 2 are evidently geologically ancient and considered inactive.

Damaging earthquakes occurred in 1836, 1838, 1865, 1868, and 1906, and more recently in 1957, originating along the San Andreas and related faults. Records of damages are scant in 1836 and 1838; extensive damages were reported during the 1865, 1868, and 1906 earthquakes.

The seismic ground response of this bedrock area such as the project site is indicated to be highly favorable in respect to the amount of damage caused from ground motion. On the basis of recent technology, it is reasonable to assume that the proposed development will be subjected to at least one moderate to severe earthquake during its design life. During such an earthquake, the danger from fault offset through the site is remote, but strong shaking of the site is likely to occur. The anticipated ground acceleration may be high, and the resulting interaction between foundation supporting bedrock and response of the various planned structures will have to be incorporated in the design. Development therefore must conform to our seismic standards HUD Handbook 4541.1 dated 11/1/73 to mitigate potential seismic impacts.

HYDROLOGY AND FLOOD DRAINAGE

Climate:

San Francisco is an air conditioned city with cool, pleasant summers and mild winters. This climate results from its unique location as the only sea level entrance through the coastal mountains into the interior of California.

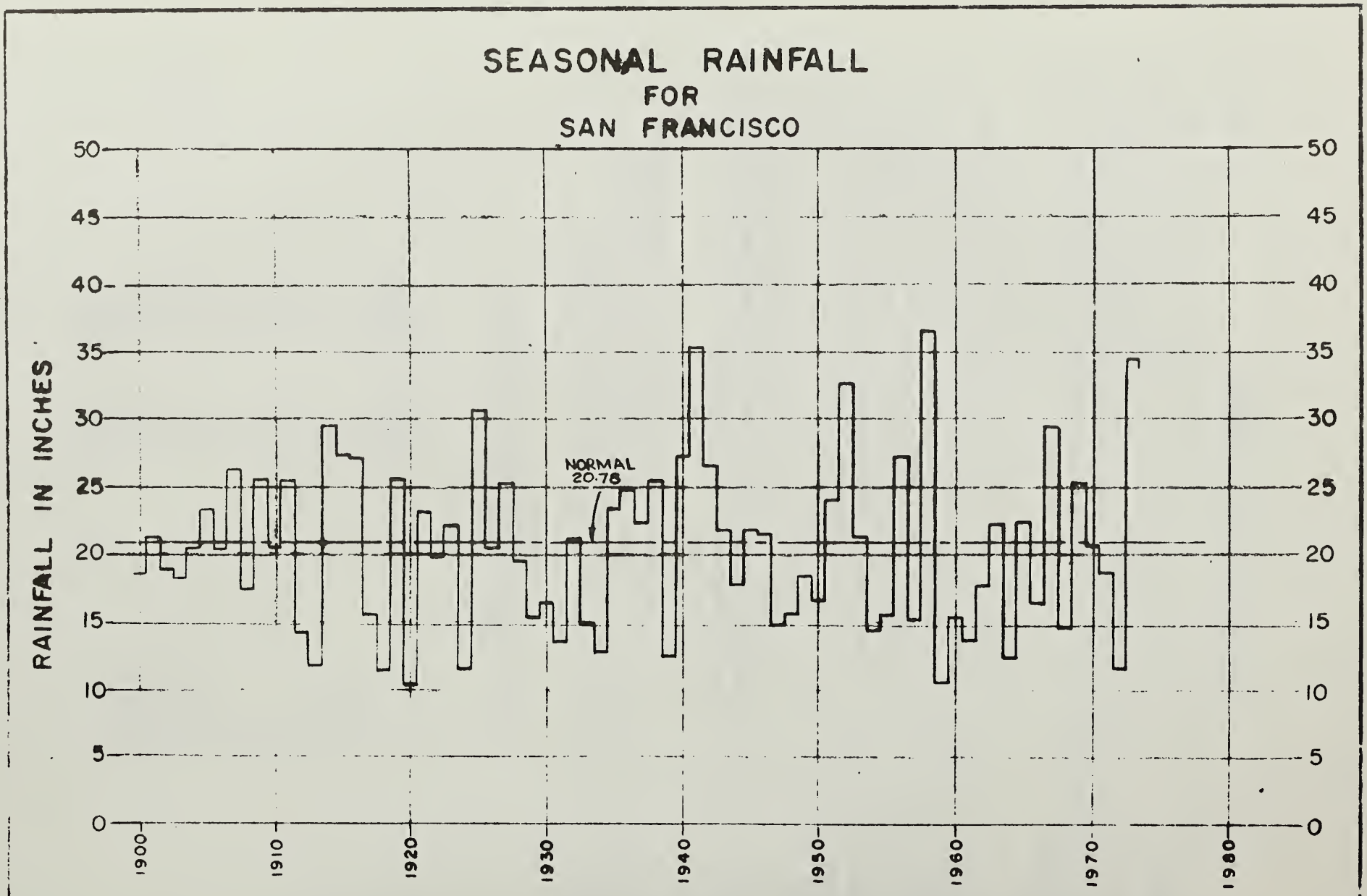
As a result of the steady sweep of air from the Pacific Ocean (at an annual mean speed of 9 miles per hour), there are few extremes of heat or cold. During 90 years of records, temperatures have risen to 90 degrees (F) or higher on an average of once a year and dropped below freezing less than once a year. The highest recorded temperature was 101 degrees and the lowest recorded was 27 degrees. The average daily temperature through the year ranges from 45 degrees in January to 69 degrees in September. As a rule, abnormally warm or cool periods last only a few days.

Climatic differences exist within the City of San Francisco, depending on the hills and the geolographical relationship to the Ocean and Bay. The most obvious difference is the greater frequency and duration of fog along the Pacific side of the City.

The normal total annual rainfall within San Francisco is approximately 20 inches (see Exhibit 2). As shown in Exhibit 1, 84% of the total annual rainfall generally occurs during the period from November to March, and 42% generally occurs during December and January.

EXHIBIT 1
ANNUAL AND MONTHLY RAINFALL VARIATION
FEDERAL BUILDING GAGE

	Amount Inches	% of Annual
January	4.57	22.5
February	3.36	16.5
March	2.80	13.8
April	1.43	7.0
May	0.59	2.9
June	0.14	0.7
July	0.02	0.1
August	0.02	0.1
September	0.24	1.2
October	0.89	4.5
November	2.24	11.0
December	4.03	10.8
Total	20.33	100.0



Report of the San Francisco Water Department Fiscal Year 1972-1973, page 19

Exhibit 2 shows the seasonal rainfall for San Francisco in inches for the years 1900-1973. In this time period, the normal annual rainfall amounts to 20.78 inches.

CLIMATIC IMPACTS: No adverse impacts are anticipated.

DRAINAGE & FLOODING

The City of San Francisco has a "combined" sewer system, wherein domestic sewage and industrial wastes are conveyed in the same sewer conduits as stormwater runoff. The City's present wastewater collection and treatment system consists of approximately 1,000 miles of sewer lines (ranging in size from 8-inch diameter pipes to a multi-barrel sewer 10-feet high and 40-feet wide), three (3) primary treatment plants, and related pumping stations, diversion structures, and outfall lines.

The City's first sewers were constructed in 1850, and approximately 700 miles of sewer lines were in place by 1935. In 1935, a revised Master Plan was implemented which divided the City into three major Districts (basic drainage basins) and proposed construction of a treatment plant for each District. The Richmond-Sunset Sewage Treatment Plant was constructed in 1939 and subsequently enlarged in 1948 and 1966. The North Point and Southeast Plants were completed in 1951. Facilities adequate for conveying all the dry weather wastewaters to the three plants become available in 1966.

There are three basic deficiencies to the City's combined sewer system as it presently exists. These are:

(1) Approximately 50% of all sewer lines are undersized, lacking capacity to accomodate the runoff from the design storm having a 5-year recurrence interval.

(2) Effluent from the treatment plants do not meet present water quality requirements or provisions of the 1972 Federal Water Pollution Control Act.

(3) When rainfall intensities exceed 0.02 inches per hour throughout the City, the combined plant capacity of 250 million gallons is exceeded and wastewaters are discharged directly to the Bay or Ocean at 41 separate outfalls along the City's shoreline.

The California Regional Water Quality Control Board, San Francisco Bay Region, has long been concerned with the deficiencies in the City's wastewater treatment system. They have caused numerous cease and desist orders and temporary building permit moratoria to be issued over this period.

The Wastewater Master Plan for the City of San Francisco

The following description of the wastewater master plan has been extracted from the "Final-Transport-Storage Operational Plan Report Bureau of Sanitary Engineering, Department of Public Works, City and County of San Francisco - June 1976." For detailed operational details, consult above report.

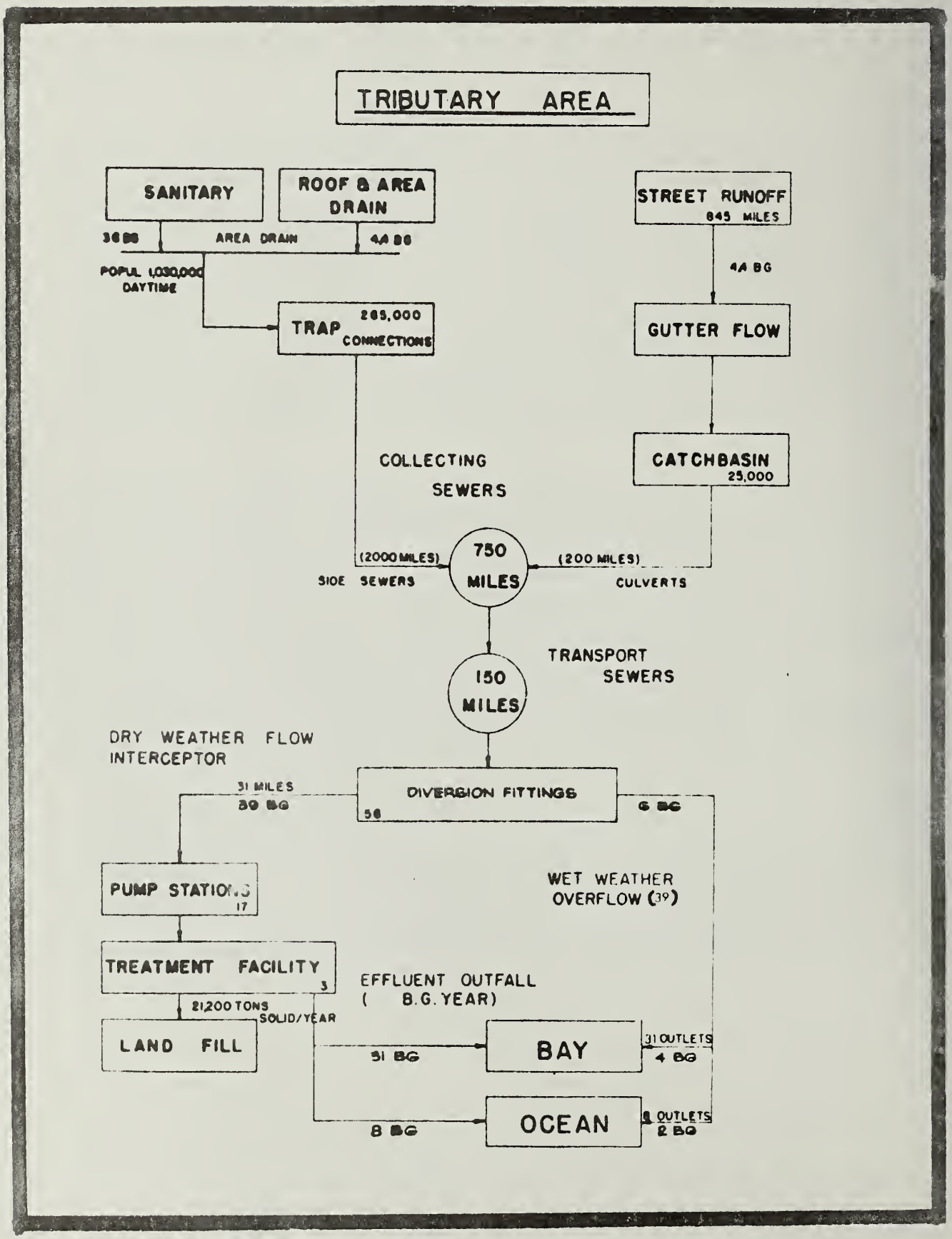
Improvements have been made to the City's sewerage system by the construction of three sewage treatment plants and a collection system consisting of interceptor sewers and pumping stations to intercept the dry weather flows which were discharging to the Bay and Ocean through shoreline outfalls. Because of cost considerations, the treatment plants and intercepting systems were sized for dry weather flow and a rainfall rate of approximately 0.02 inches per hour at rainfall rate of approximately 0.02 inches per hour. At that time, it was not considered necessary to design for a larger fraction of storm water based on the concept that the early portion of storms flushed a high percentage of sanitary matter in the sewers and that which overflowed was a dilute mixture containing a small percent of sanitary flow. Massive treatment facilities would have been required to treat the runoff at the high rates generated during storms.

During periods of light rainfall (approximately 0.02 inches per hour), the system operates essentially as in dry weather except for increases in flow. As a result, approximately 32% of the yearly runoff is treated. During heavier rainfall periods, however, when rainfall exceeds 0.02 inches per hour, the flow in the combined sewer system exceeds the 250 MGD hydraulic capacity of the three treatment plants. The excess combined wastewater flow is discharged untreated from 39 outfall structures located around the periphery of the City. In an average year, approximately 82 overflows occur. Although the duration of the overflow period is small--about 2.4 percent of the time in an average year--water quality and beach conditions are affected for days after each overflow. Generally, these overflows cause deposits of waste material on the beaches throughout the winter months.

Wet Weather Problem Analysis

Wastewater flows from San Francisco in the amount of 36.5 billion gallons per year from domestic and industrial sources and 8.8 billion gallons of storm runoff, totaling 45.3 billion gallons, constitute the annual water mass to be controlled prior to discharge. Of this total, 39.3 billion gallons are now treated annually and 6 billion gallons overflow directly to receiving water without treatment.

EXHIBIT 3


TRIBUTARY AREA
SANITARY
ROOF & AREA DRAIN
STREET RUNOFF
845 MILES
36 BG
AREA DRAIN
44 BG
44 BG
POPUL 1,030,000 DAYTIME
TRAP 285,000 CONNECTIONS
GUTTER FLOW
COLLECTING SEWERS
CATCHBASIN 25,000
(2000 MILES)
750 MILES
(200 MILES)
SIDE SEWERS
CULVERTS
TRANSPORT SEWERS
150 MILES
DRY WEATHER FLOW INTERCEPTOR
31 MILES
30 BG
DIVERSION FITTINGS
56
6 BG
PUMP STATIONS 17
WET WEATHER OVERFLOW (39)
TREATMENT FACILITY 3
EFFLUENT OUTFALL (B.G. YEAR)
21,200 TONS SOLID/YEAR
LAND FILL
51 BG
BAY
31 OUTLETS
4 BG
8 BG
OCEAN
8 OUTLETS
2 BG

San Francisco receives an average of 20.33 inches of rainfall annually as based upon 62 years of records at the USWB Federal Office Building gauge. On the basis of the 24,500 acres of sewer service area in the City and assuming a runoff coefficient of 65%, there are 8.8 billion gallons of runoff derived from the 20.33 inches of rainfall. Of this amount, about 2/3 drains to the Bay and 1/3 drains to the Ocean. The existing system diverts about 2.8 billion gallons of the total 8.8 billion gallons (approximately 32%) to treatment. The remaining 6 billion gallons overflows with approximately 4 billion gallons discharging to the Bay and the remaining 2 billion gallons discharging to the Ocean.

The basic concept of the Master Plan, developed as an overall solution to the water pollution problems facing the City, is to provide a higher degree of treatment, an increase in treatment capacity, and a storage system to attenuate storm runoff rates by temporarily storing the runoff for later treatment. This capability offers the opportunity to take full advantage of the total storage capacity in the system which might not otherwise be used due to spatial variations in rainfall and hence runoff.

Existing Sewage System

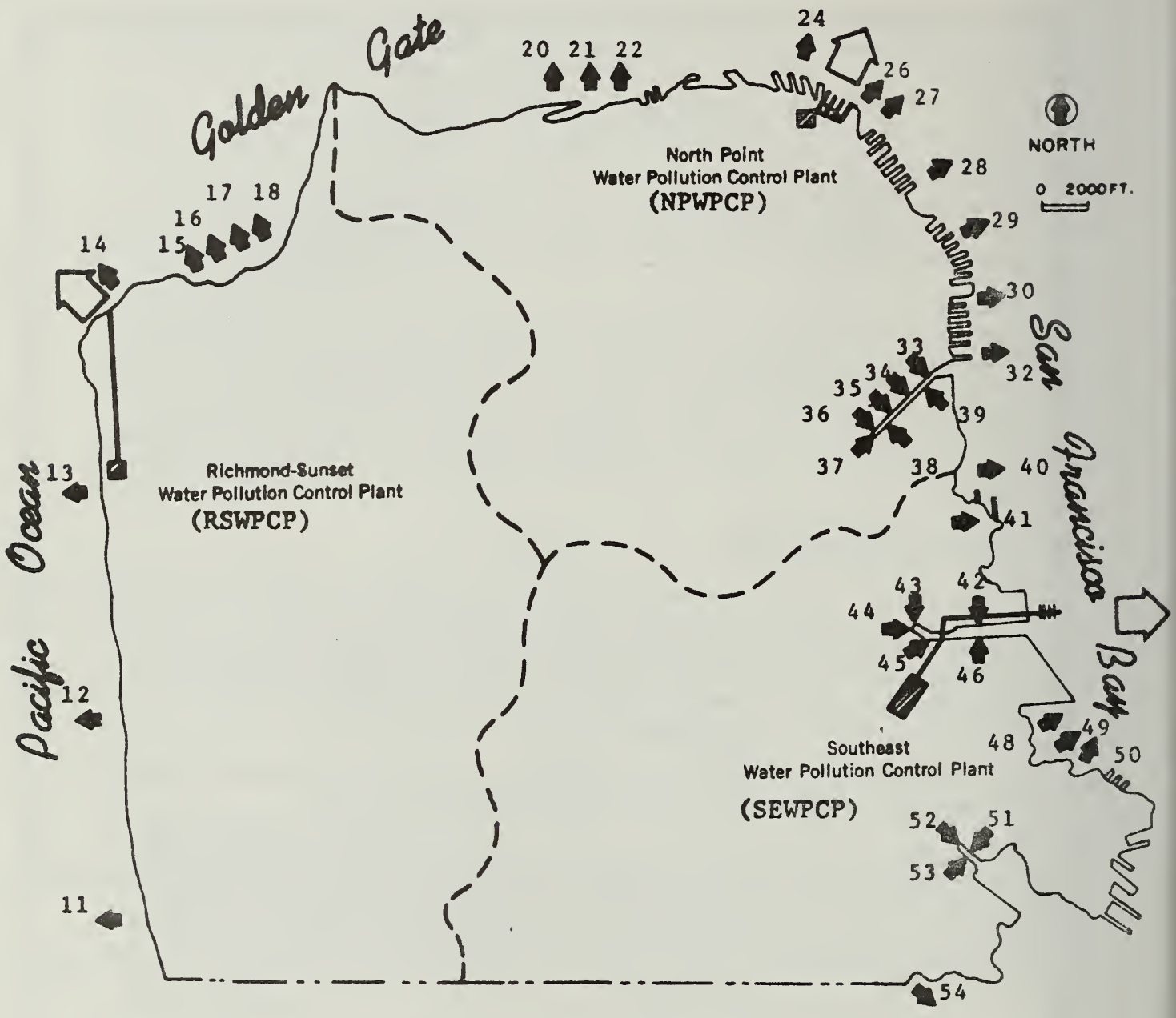
The existing combined sewerage system must transport, treat and dispose of both dry weather flows and combined wet weather flows. To function under the extreme ranges encountered under the dual regimen of wet weather conditions, the system was originally arranged and sized to accommodate the wet weather flow conditions primarily. Exhibit 3, opposite, shows a block diagram of the system.

The City is divided into three sewerage service areas, each of which is presently served by a primary sewage treatment plant.

The three plants are the North Point Water Pollution Control Plant, Richmond-Sunset Water Pollution Control Plant and Southeast Water Pollution Control Plant. The location of each of the plants and its outfall, together with the approximate area it serves, is shown on Exhibit 4. Within each service area of each plant are varied land uses and population densities.

EXHIBIT 4

TREATMENT PLANTS AND OUTFALL LOCATIONS



Presently the City is divided into three drainage districts (indicated by the broken line) which follow the topographical features of the City. Each of the districts is served by a Water Pollutuon Contol Plant which provides primary treatment with chemical addition before discharge of the effluent through an outfall (represented by the large arrows). Located around the perimeter of the City are 39 bypass locations (represented by the solid arrows) where a combination of untreated domestic wastewater and stormwater overflow into the Bay and Ocean when rainfall exceeds 0.02 inches per hour. Overflows occur approximately 80 times per year.

Numbers adjacent to arrows represent the outfall system reference number which is keyed to Master Plan documents.

North Point Water Pollution Control Plant (NPWPCP)

The North Point Water Pollution Control Plant serves an area of 7,500 acres. The tributary area includes residential, commercial and industrial land use areas. The plant now provides a chemical primary treatment consisting of pre-chlorination, screening, grit removal, preparation and primary sedimentation with chemical coagulation using ferric chloride and postchlorination. Flows exceeding plant capacity are bypassed directly to San Francisco Bay without any treatment at 17 locations. The primary effluent does not meet the National Pollution Discharge Elimination System (NPDES) and Regional Water Quality Control Board (RWQCB) discharge requirements.

Project Drainage

The area built upon (including improved streets) is expected to increase from approximately 21,900 ft. to 429,000 ft. This would result in increase storm runoff from 21,000 ft.[1] Using the rational formula Q = CIA where:

I is the average rainfall intensity in inches per hour
A is the drainage area in acres.
Q is the rate of runoff expressed in cubic feet per second. (which is practically equivalent to acre-inches per hour)

Design calculations are based upon criteria furnished by the City of San Francisco and all are sized to carry the gravity flow produced by a storm having a 5-year recurrence interval, assuming a free outlet condition.

This would result in an increase storm runoff of approximately 258 cubic feet of water per day during the January peak wet period month, based on an intensity of 4.57 inches at the Federal Building weather gauge. Thus an increase of 0.002 million gallons per day (MGD) would result requiring treatment in the city combined system during peak periods at the North Point Water Pollution Control Plant.[2]

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(1) Environmental Impact Report - City Planning Commission, April 25, 1974, page 10

(2) Ibid pg. 11

The drainage water generated in this project area in general will be conveyed to existing 21-inch storm sewer in Sacramento Street. The sewer has a slope of approximately 18% and has sufficient capacity to handle generated flows.

Drainage and Flooding Impacts:

1) The amount of storm runoff from this site and the increment in the daily load due to the additional population will not result in a significant increase in demand on the combined sanitary and storm sewer system, but will have a slight adverse effect until the City improves its sewage handling system with implementation of the Wastwater Master Plan.

2) Due to slope of project area, minor construction problems may develop in controlling rainwater.

PART III

ALTERNATIVES TO THE PROPOSED ACTION

The proposed action is for HUD to approve the Project, which would result in assuring the Sponsor that HUD Section 236 rent subsidies would be available. The Project after construction would provide 140 housing units for low income elderly persons and 35 housing units for low income families. The commercial development is a portion of the Sponsor's project. The commercial parking garage is a separate financial operation.

1. No HUD Assistance - Market Rate Housing

An alternative is for HUD to reject the Project. This would eliminate the housing subsidies and the Project would not be feasible as proposed. The San Francisco Redevelopment Agency, as the owner of the land, would under existing procedures be required to seek alternative land disposition proposals. HUD is not considering other housing subsidy programs for this siteand, therefore, other housing proposals/for the site would be based on market interest rates.

The usual method of a redevelopment agency to consider non-subsidized housing is to advertise for development proposals from profit-motivated firms. The agency may or may not in its various selection criteria include a factor for housing density and building heights. However, due to the shortage of housing in San Francisco and developer incentives for maximizing development, it would appear reasonable to expect, as a maximum, the same level of development as the proposed Project.

With appropriate City approvals, market rate housing is a viable alternative to the Project. The market rate housing would be for upper middle income individuals and families to reflect market costs of construction and rental/sale housing. Based on the low vacancy rate of housing in San Francisco, there is a strong market for this priced housing.

This alternative would not reduce or eliminate the adverse environmental impacts. The noise and air pollution impaction on the site from Sacramento and Stockton Streets would remain the same or increase since upper middle income persons would use automobiles more frequently than elderly persons or low income families.

The blocking of views and the casting of shadows on nearby properties would likely remain unchanged or possibly increase depending on whether the development was greater than the size of the proposed Project. Construction costs to shift the high rise tower to the corner of Sacramento and Stockton Streets are estimated to be substantial and profit-motivated developers would also be guided by such additional costs.

HUD's original approval of the Neighborhood Development Program for this housing Project was to assist in alleviating the critical housing shortage in the area for low income elderly and low income families. This critical shortage in low income housing continues. The alternative Project for market rate housing does not appear to be the solution to the serving of low income individuals and families and does not mitigate against adverse environmental factors. Accordingly, HUD considers this market rate housing alternative to be a less desirable development.

2. No HUD Assistance - Commercial/Hotel Development

Another alternative to the proposed Project is for the San Francisco Redevelopment Agency to sell the site for commercial and/or hotel development.

This alternative would involve the maximizing of development on the site. Less than full potential development would be economically unrealistic because of the site location and potential uses of the site. Full development of the site for a commercial/hotel complex would utilize the site at least to the same extent as the proposed Project. Due to the shortage of available land in the area, development proposals for a commercial/hotel configurations may well exceed substantially the height and bulk of the proposed Project.

Development of the site for commercial/hotel uses would not reduce any of the anticipated adverse environmental factors of the Project. The air and noise intrusion from Sacramento and Stockton Streets will be at the same level of increased due to additional traffic originating from commercial/hotel uses from the proposed Project. The blocking of views and the casting of shadows will remain the same or increase those expected from the proposed Project. Higher or bulkier construction would cause such increases. In the event that the high rise tower is shifted to the corner of Sacramento and Stockton Street, as a commercial/ hotel venture, substantially greater height and bulk would be necessary to gain additional revenues to pay for the higher costs necessitated by the shift. In addition, more garage space would be required under San Francisco requirements for the commercial/hotel development than for the elderly and family residential uses.

The alternative development of the site for commercial/hotel construction does not appear to be an advantageous choice over the proposed Project. None of the anticipated adverse environmental factors would be mitigated and, there is a good likelihood that they would be aggravated. The purpose of the Project to provide low income housing for elderly and families would not be served. Even if there were a shortage of commercial/ hotel space, in San Francisco it would be more appropriate to alleviate the shortage of housing than the shortage of commercial/hotel space.

3. No HUD Assistance - Open Space/Park

One alternative to the proposed Project is for the San Francisco Redevelopment Agency to sell/transfer the site to the City for the creation of an open space area or park development. It is expected that San Francisco would have to seek a ballot approval for the issuance of park bonds for the acquisition and development of open space or a park.

The open space/park alternative is an attractive feature in almost any location and would enhance values in the immediate vicinity. The site itself, however, does not lend itself topographically to an open space/park area. Extensive grading and the construction of retaining walls and terracing would be necessary to level the land for pedestrian and children's play areas.

An open space/park development would be subjected to the same air and noise impactions from traffic on Sacramento and Stockton Streets. These adverse environmental factors could be mitigated by the construction of masonry walls circumscribing the site. Such a wall, however, would effectively eliminate the major amenities of open space/park activities.

The alternative of open space/park does not meet the needs for housing of low income elderly persons and families in the area. Portsmouth Square Park is a block and a half away and substantially serves the area. HUD feels that the need for low income housing reflects a significant hardship on potential persons to be served by the Project. In this choice of alternatives, the priority is to meet, to the extent proposed, the need for low income housing.

4. Alternative Locations

Other site locations for the Project are possible alternatives to the proposed Project. Other site alternatives may also provide additional housing for low income elderly and families. Another site now under development for low income families is in the Hunters Point area. HUD recently considered and approved approximately 600 units of subsidized housing in that area for low income families. Housing for low income families has been considered by the Recevelopment Agency in Yerb Buena Project.

Because there exists a lack of available sites in the vicinity of the proposed Project, it is impossible to identify specific alternative site locations. At this time, HUD is not aware of any sites within a mile or more of the proposed Project (other than redevelopment areas--because such areas have already publicly been considered for housing for low income persons) that is available for the development of housing for low income families and/or individuals. HUD would be interested in the consideration

of additional housing for low income persons if alternative site locations in the area become available. The reason is that the housing shortage for these low income persons is critical and if sites become available, they will be considered as additional sites for such housing in addition to the proposed Project.

A Major factor in alternative site availability is that the subject site is owned by the San Francisco Redevelopment Agency. That Agency, following public notice and public hearings, determined that it was in the public interest to acquire the subject site and prepare it for the construction of low income elderly and families. The San Francisco Board of Supervisors concurred. Alternative sites would have to undergo similar public acquisition to bring the costs down within the statutory cost limitations of the proposed Project. At this time, there are no intentions by the San Francisco Redevelopment Agency to acquire additional sites for these purposes.

5. Site and/or Design Modification

During the design preparation of the proposed Project, a variety of different configurations on the site were considered by the sponsor and HUD. These variations included siting the structures on different site locations, altering height and building bulk and other more detailed architectural changes. These variations were reviewed by HUD technical staff.

The resulting Project design by the sponsors has received initial, though not final, HUD approval. No design will receive final approval by HUD until after proper completion of the environmental process and construction drawing approvals.

A proposal has been suggested to HUD to shift the location of the 13 story residential tower from its proposed location to the corner of Sacramento and Stockton Streets. HUD has reviewed this concept to ascertain if the suggestion is economically feasible and how the suggestion would affect the views of the Bay from nearby residential developments.

HUD finds that the suggested modification would cost about $300,000 more than existing cost estimates for the proposed Project. HUD also finds that certain views towards the Bay will be substantially blocked and others will be partially blocked which would be made necessary by changing the tower location. Details of these two analysis are in the following Sections on Architectural Aesthetics and Cost Analysis.

The additional cost of some $300,000 is required to provide a ductile frame which would be made necessary by changing the tower location. This is an added cost of $1,700 per residential unit proposed. An estimated 19 dwelling units behind the proposed housing tower will be affected. The cost to shift the tower would be over $15,000 per view-affected unit. The extra cost of such a move would be passed on to the tenants, who would then have to receive additional HUD subsidy payments to amortize the cost of the tower move.

HUD regrets that the views of about 19 residential units will be restricted to some extent by the proposed Project. However, the present proposal with the tower at the top of the site does emphasize its hillside nature and is consistent with the principles of the City's Urban Design Plan. Moving the tower would also block the views of other neighbors on California Street. This the alternative would cost more and be aesthetically less pleasing merely to shift view blockages from one group to another.

Another major consideration is the urgent need for low income housing for elderly and family units in the area. This need is especially critical for such low income persons because there are almost no alternatives for such persons, other than established public housing developments. Moreover, the waiting list for these public housing units is long and significant hardship falls on those elderly and families who are in urgent need of decent, safe and sanitary housing within their financial means.

After consideration of the cost factors for shifting the tower over the proposed Project garage and the other factors noted, HUD believes the proposed Project design is appropriate and preferable over the suggested change.

ARCHITECTURAL AESTHETICS

In the course of the preparation of the Draft Environmental Impact Statement on Mei Lun Yuen, the 840 Powell Street Homeowner's Association submitted an alternative proposal together with other points which they requested HUD consider in the course of its study. (See following two pages). This assessment, together with the following one on Cost Analysis are primarily concerned with this alternative proposal although the shadow studies and some other aspects include the main proposal.

DESIGN

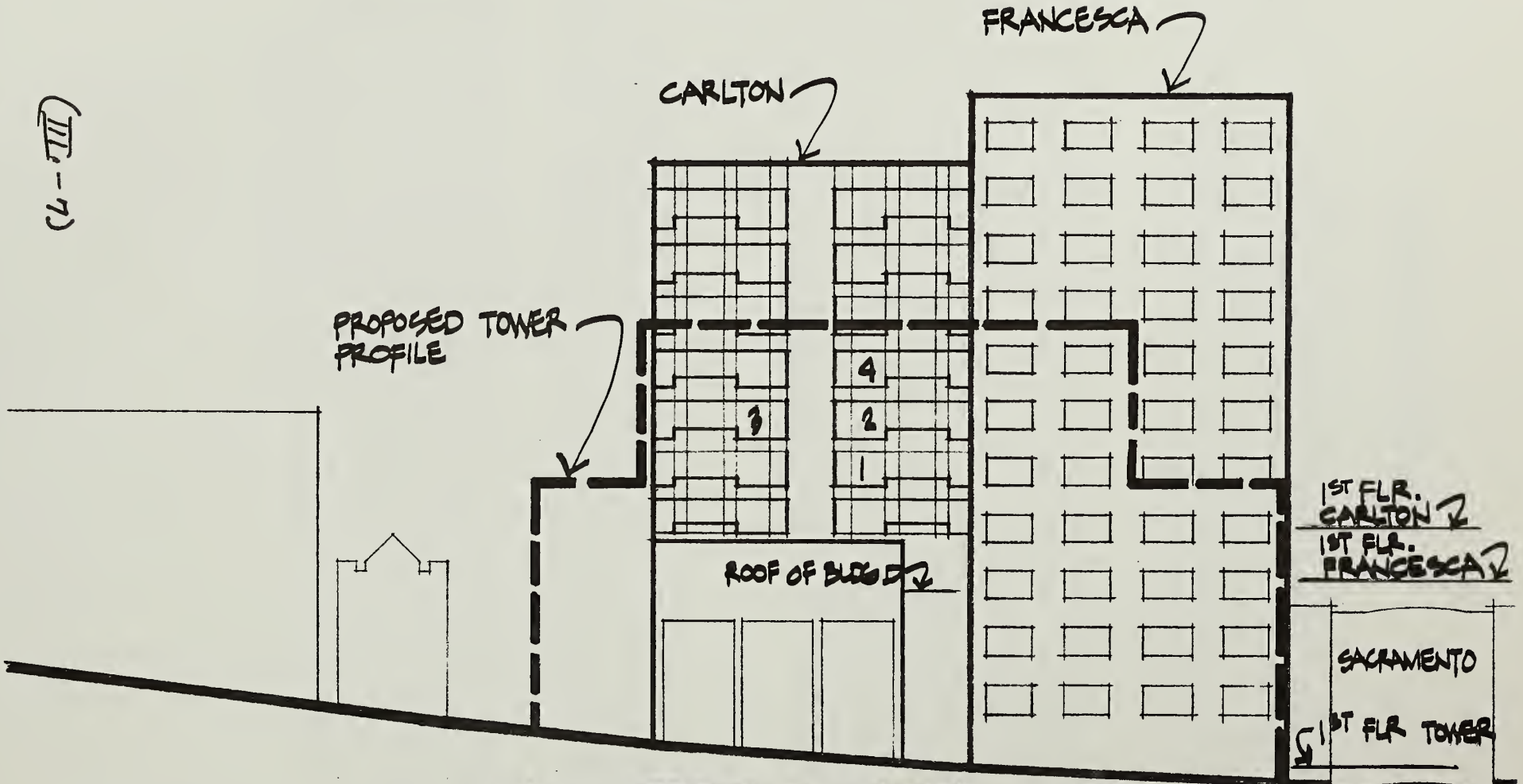
The site itself suggests that the building heights should be graduated up from a low point at Stockton and Sacramento Streets. For example, the tower is placed towards the crown of the hill while the smaller scaled family units are placed at the slope of the hill. The elevations from Sacramento Street provide visual interest and enrichment. The image will be white in color, Mediteranean-like, with bay windows which is consistent with the historic scale and texture of San Francisco. The buildings maintain an appropriate level of light and air for residents and for pedestrians. (Even though the Redevelopment Plan is controlling, the design of the Mei Lun Yuen tries to adhere in every relevant way to the Urban Design Plan For The Comprehensive Plan of San Francisco as set forth by the San Franciso Planning Department.)

Financial Feasibility

One of the points raised by the Homeowner's Association of 840 Powell Street involved the possibility of eliminating the commercial and commercial parking garage uses on the subject site which would then allow the proposed housing and residential parking facilities to be constructed on a lower scale. However, such a change would have an adverse financial impact on the financing of the entire Urban Renewal Project.

The development of the Mei Lun Yuen Project will be accomplished under the Urban Renewal regulations of Title I of the Housing Act of 1949, as amended and Section 236 of the Housing and Urban Development Act of 1968. Under the provisions of the Stockton-Sacramento Urban Renewal Plan the anticipated proceeds from the sale of the land for Section 236 residential, commercial and parking garage uses is somewhere around the Fair Market Value of $567,000. However, if the land were sold for Section 236 housing only, Title I of the 1949 Housing Act as amended permits the Fair Market Value to be set at $500 per dwelling unit or $87,500. ($500 x 175 units = $87,500).

(III-7)



JOICE STREET ELEVATION LOOKING WEST

1" = 30'-0"

This is a Loan and Grant Urban Renewal Project, and the federal loan must be paid off with grants and proceeds from the sale of the land. Since the anticipated land sale proceeds under the multi-use design of the Urban Renewal Plan are some $567,000, changing the Urban Renewal Plan to permit only Section 236 housing would leave a net deficit of some $479,500. The Federal Government (HUD) does not have any additional urban renewal grants to give to the San Francisco Redevelopment Agency to assist it in making up this deficit. Hence, it would have to be repaid by the San Francisco Redevelopment Agency or the City of San Francisco from local sources.

In setting up the original Urban Renewal Plan which still governs this Project, the multi-use concept was adopted to insure the financial feasibility of its implementation.

VIEW STUDIES

The most controversial issue raised about this project is the blockage of views of the San Francisco Bay by the Homeowners Association of 840 Powell Street, a high-rise apartment building west of the project site. The blocking of views by the proposed design has been carefully studied by Architects Associated and by HUD. Photographs were taken from units on all of the affected floors of 840 Powell Street. It has been determined as much as possible where the proposed tower might impinge upon critical views. The tower design takes these concerns into consideration by stepping down at both ends leaving open the best views of the Bay for most of the units. (See Joice Street elevation, opposite.) The tower location and configuration have been adjusted to grant the tenants of 840 and 850 Powell Street clear and relatively unhampered views of the San Francisco Bay. While taking photographs from 840 Powell, Architects Associated and HUD were able to view the proposed site and project the imaginary lines of the proposed building. The photographs shown on the next pages were taken by HUD staff and indicate the views as shown by Architects Associated before and after the tower. The view study (page III-13) shows the project with its high-rise tower, the two affected high-rise buildings behind it, and indicates major landmarks. Major towers in the line of sight are shown: One Embarcadero Center, The Transamerica Building, 300 Broadway, Holiday Inn, and the Empress of China (China Trade Center). The long triangular shape indicates the major preferred view of the Bay as expressed to Architects Associated by the tenants at 840 and 850 Powell Streets and as expressed to the HUD representative by the tenants at 840 Powell Street. The photographs show the present views of the Bay from 840 Powell Street. The portions to be obscured by the proposed tower are eliminated in the lower photograph by that portion describing the view.

VIEW FROM
201

#1

28MM

VIEW
FROM
#301

#2

M.M.

VIEW FROM 302

#3

2 MED

VIEW FROM 302

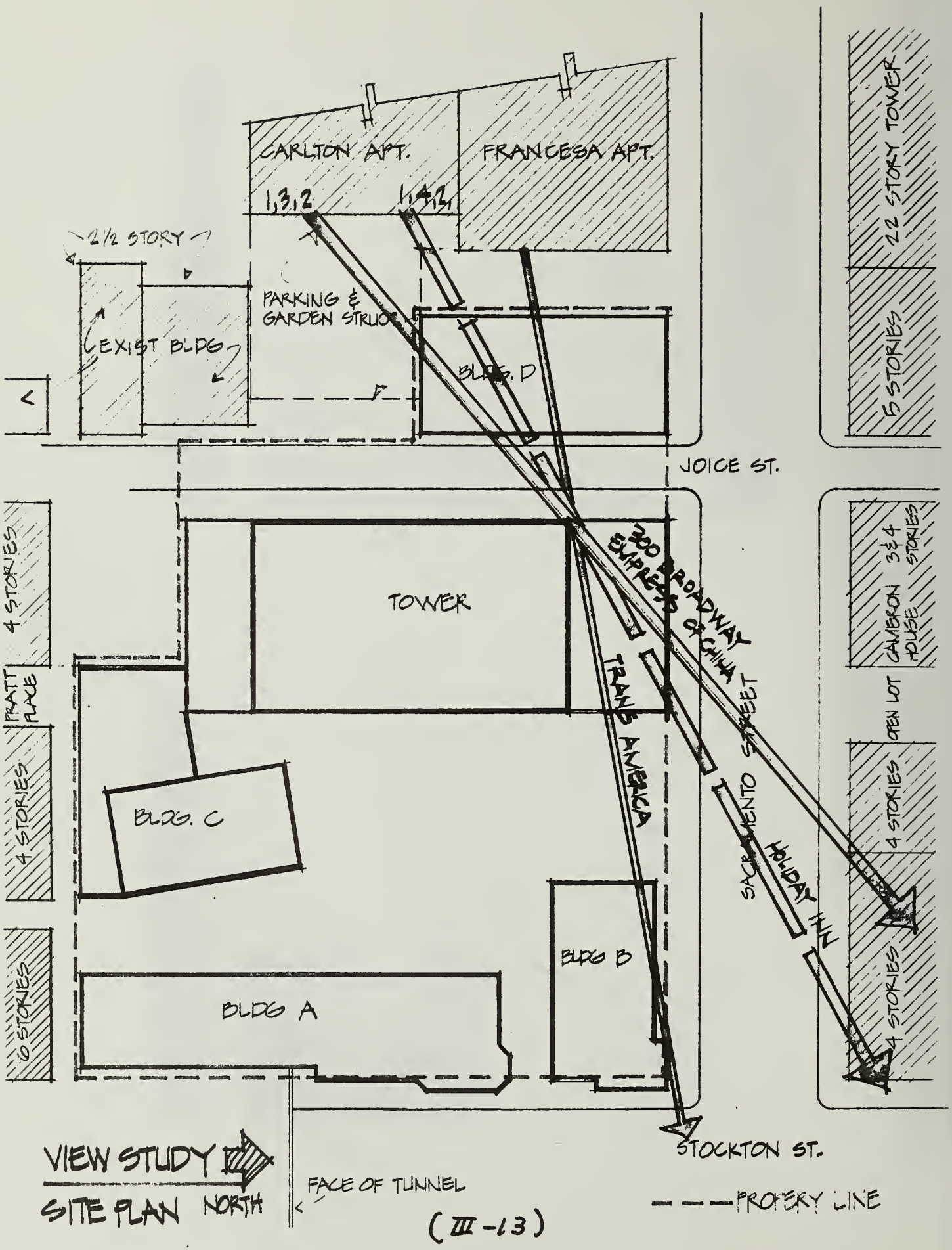
28 A. M.

#3

VIEW
FROM
401

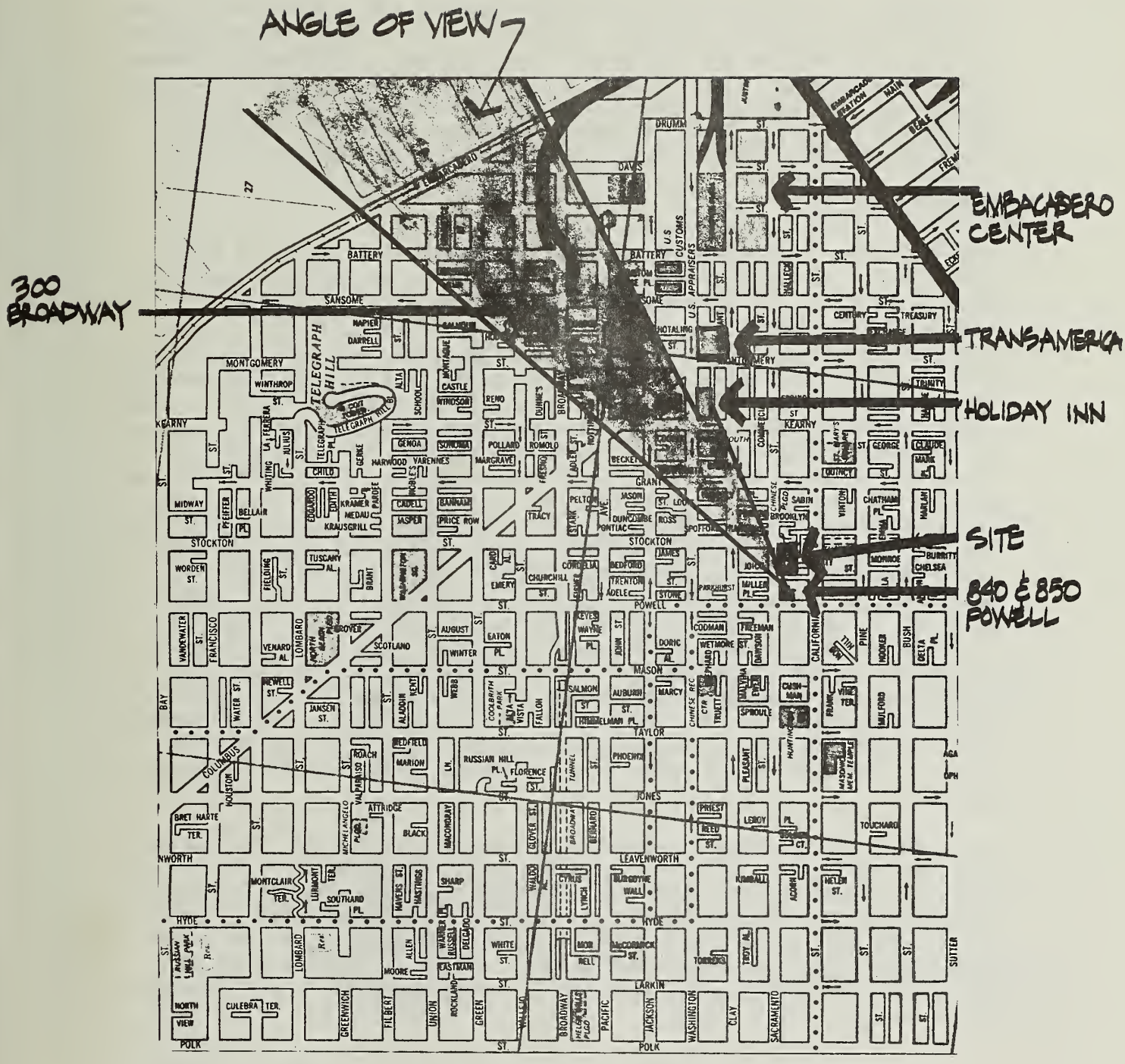
N16 28mm

#4



VIEW STUDY

SITE PLAN NORTH


ANGLE OF VIEW 7
EMBACADERO CENTER
300 BROADWAY
TRANSAMERICA
HOLIDAY INN
SITE
840 & 850 POWELL
TELEGRAPH HILL
BATTERY
SANSOME
MONTGOMERY
KEARNY
STOCKTON
POWELL
MASON
TAYLOR
JONES
LEAVENWORTH
HYDE
LARKIN
POLK
CALIFORNIA
PINE
BUSH
SUTTER
COLUMBUS
RUSSIAN HILL PL.
NORTH

VIEW STUDY

The numbers on the site plan, see page opposite III-13 the elevation and the photographs all key together to give a clear picture of the situation in all of the affected units at 840 Powell Street. Blockage is minimal since the building is at a higher elevation than the proposed tower and is located one-half of a city block away. 840 Powell Street is approximately 100 feet away from the tower; note that there is a 22-story apartment building only 49 feet away from 850 Powell Street.

SHADOW PATTERNS

Shadow patterns have been studied by Architects Associated for every season and time of day for the project and its surroundings. Architects Associated have projected shadows for the summer solstice (June 21), spring equinox (March 21), and autumn equinox (September 23) at 1:00, 2:00, and 3:00 p.m. These studies (located at the end of this chapter) show that the open areas receive adequate sunlight through 2:00 p.m. in mid-winter; the open areas will be in shadow during the afternoon. The first series of shadow patterns show the site before development (pages A, B and C). The second series of shadow patterns show the project tower at different locations on the site (pages D, E, F and G). These studies were used to determine the best location for the outdoor open area. Although pages D and E indicate that there are large sunny areas, the tower is at the slope of the hill which is not consistent with the urban design plan of San Francisco. Page G indicates that the tower placed at the crown of the hill will allow a large sunny area from 10 a.m. until 2 p.m. (page N) and this is during the autuminal solstice. It would be greater during the summer solstice (page M). The third series of studies (pages H, I, J, K, L, M and N) show the tower at different locations, but also include the smaller buildings. Pages M and N clearly indicate that the scheme shown will have a sunnier outdoor area more of the time than any other scheme. This proposal has the tower at the crown of the hill and the smaller buildings at the slope of the hill.

The shadow studies were verified by HUD staff and found to be true and correct. The method used to verify the shadow studies was the sun path diagram as shown on pages 70 and 71 of Architectural Graphic Standards, 6th edition, by Ramsey/Sleeper, published by John Wiley & Sons, Inc., N. Y. If the Project is approved, Architects Associated will hire a wind expert consultant to study wind patterns. A model will be built to conduct wind tunnel studies as well as to further study shadow patterns and demonstrate view blockage.

CODE VIOLATIONS

Two letters from the Department of Public Works granted variances to Architects Associated. The first letter, dated August 26, 1974, states: "It has been noted that Building D is a four-story building of type 5-one hour construction with type 1 construction on the first floor containing the B3 occupancy. Pursuant to the applicable provisions of Section 507, this bureau hereby approves the location of B3 occupancy on the ground floor of Building D provided the following conditions are complied with:

1. A supervised automatic sprinkler system shall be provided throughout the entire building.

2. The main entry to Building D shall be arranged to front Sacramento Street.

3. Allowable floor areas shall conform to the provisions of Section 505-A."

The second letter, dated July 24, 1975, states: "It has been noted that Building "C" is a five-story building of type 3, 1-hour construction with type 1 construction for the B3 occupancy on the ground floor. Pursuant to the provisions of Table Nos. 5-D and 5-E and Section 507 of San Francisco Building Code, this bureau hereby permits the location of a group B3 occupancy on the ground floor of Building "C" provided the entire building is equipped with an approved supervised automatic sprinkler system and provided a fire department apparatus access to the building approved by the San Francisco Fire Department is provided and a copy of the recordation of the San Francisco Fire Department access road is attached to the building permit application."

The variances were signed by Alfred Goldberg, Superintendent, Bureau of Building Inspection.

The project, as proposed, does not violate the building and fire code as per Article 5, Table 5-A, page 119 of the San Francisco Building Code. This was verified by Mr. Alec Corenevsky, Senior Plan Checker of the Department of Public Works. The windows can be operable and the building will have a sprinkler system. For fire truck egress, see Public Services, Part II of this report.

PREFERRED VIEW

The major preferred view expressed by the tenants to HUD staff and Architects Associated while in the field was of the Bay. According to Architects Associated that view will be preserved.

CONCLUSION

In reviewing the design by Architects Associated, the HUD critique and alternate solution, the point by point response by Architects Associated, and the proposal by the 840 Powell Street Homeowners' Association, it would appear that the current solution is responsive to the questions raised by this complex architectural and environmental problem. The current project design answers all of the objections so far raised. It will continue to be refined as the working drawings develop.

COST ANALYSIS OF PROPOSED ALTERNATIVE

This discussion is concerned primarily with the probable additional cost of the engineering requirements involved in relocating the tower building to the east side of the property at Sacramento and Stockton Streets as proposed by the 840 Powell Street Homeowners Association. Since there was no specific drawn relocation proposal to analyze (the proposal is contained in the first paragraph of the letter from the 840 Powell Street Homeowners Association), HUD extrapolated from several basic assumptions which seemed most appropriate to accomplish the proposed alternative.

For example, the proposed tower is 64' x 160'. Reference to the sketch, opposite, indicates that if the long axis of the building is turned in on east/west direction from its present north/south configuration, the building would have to be moved in from the south property line at least 37' 6" or the 160' dimension would have to be reduced. (See dotted outline) If the building axis remains as at present but the structure is shifted to the southeast corner of the property (see heavy outline on sketch) the two parking levels behind the lobby would probably have to be relocated because of access problems from the upper level of Stockton Street. If the building is shifted to this corner and it is possible to eliminate and/or reduce the parking area floor heights so that the total height of the garage and tower does not exceed 160' it might be possible to design the structure without complying with the structural requirements of a ductile frame. the San Francisco Building Code stipulates that if a building is over 160' in height, it must be designed with a ductile frame. In essence, this type of frame requires considerable additional reinforcing steel in the columns and where the columns and slabs come together. In addition it is more expensive to place the various elements of the building itself.

Since, as discussed in the Architectural Aesthetics Section, inclusion of the commercial garage structure is necessary for the project's financial feasibility, that part of the design cannot be eliminated. Building of the tower over the garage is assumed to make a ductile frame necessary because of the combined structural height of the garage and tower.

In order to arrive at a total cost estimate in the absence of working drawings, several basic assumptions have been made. It is assumed that shifting the tower could be accomplished, that it would be located over the proposed commercial garage, that it would retain some of its own garage area, but that the balance of the garage area would have to be accommodated elsewhere on the site and that it would not be possible to limit the more stringent design to the tower and that portion of the garage directly under the tower.

Consultation with a HUD Structural Engineer obtained the opinion that having to use the ductile frame design in lieu of shear walls would add about 20% to the cost of the frame. Even though the extra cost would be limited to the reinforced concrete frame (because heating, cabinets, etc. would not be involved) an addition of 20% to that component alone would be a considerable sum.

HUD then decided to consult with people outside HUD who might have knowledge pertinent to this subject. The first was a structural engineer of a firm in Sacramento who has built many reinforced concrete high-rise structure here and in Los Angeles using the Dillon pre-fab system as well as conventionally designed structures not related to HUD programs. He agreed that use of the ductile frame could cost as much as 20% more. Several others were contacted, one of whom was a structural engineer of a firm who had had the occasion to make a comparison of this sort about a year ago. He stated that at that time their study indicated a ductile frame would cost $1.120/sq. ft. more. He was then asked if it would be possible to limit the more expensive ductile design to the tower and the portion of the parking garage directly below. His response was that it probably would be possible to design the tower support structure separate from the rest of the garage, but he thought any savings in construction would be reduced because of the need for extra columns in the separate garage as well as extra cost for some sort of slip-joint where the two structures met. Additionally, there would be continuing maintenance cost through the years. He doubted that the City and County of San Francisco would agree to such a design, but rather would insist the whole building be designed as a ductile frame.

On the basis of the above data, the more modest figure of $1.20/sq. ft. determined in 1975 has been escalated by 12% (July 1975 to July 1977) - a conservative rate considering the material and labor increases being experienced. This comes to $1.35/sq. ft.

Calculations are as follows:

Gross area of the tower 134,101 sq. ft. x $1.35	=	$167,536,
	say	165,000
Garage area below tower 41,000 sq. ft. x $1.35	=	55,350
Balance garage/commercial area 59,680 square feet x $1.35	=	80,568
		$135,918,
	say	135,000
TOTAL		$300,000

It should be noted the higher rate of 20% was not used nor were any additional costs assumed for accommodating the balance of required tower parking elsewhere on the site.

The ramification of such additional costs are presented on page III-4 under 5., Site and/or Design Modification.

PROJECTED SHADOW PATTERNS

PROJECTED SHADOW PATTERNS

Site Prior to Development

A	Vernal Equinox	Mar. 22 and September 23	3 P.M.
B	Vernal Equinox	Mar. 22 and September 23	4 P.M.
C	Winter Solstice	Dec. 22 - 3 P.M.	

Tower at Different Site Locations

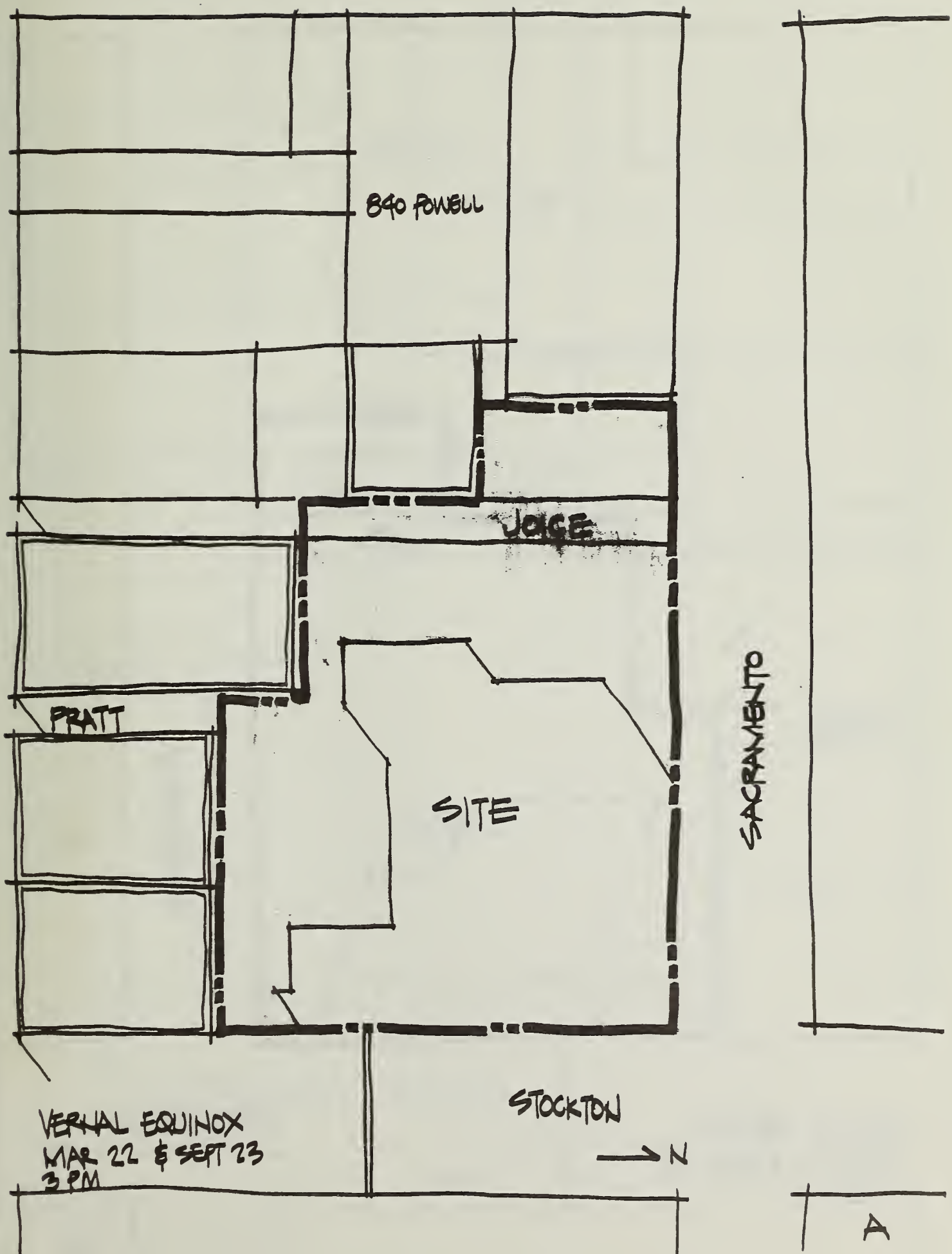
D	Vernal Equinox	Mar. 21 and September 23	2 P.M.
E	Vernal Equinox	Mar. 21 and September 23	2 P.M.
F	Vernal Equinox	Mar. 21 and September 23	11 A.M.
G	Vernal Equinox	Mar. 21 and September 23	10 A.M.

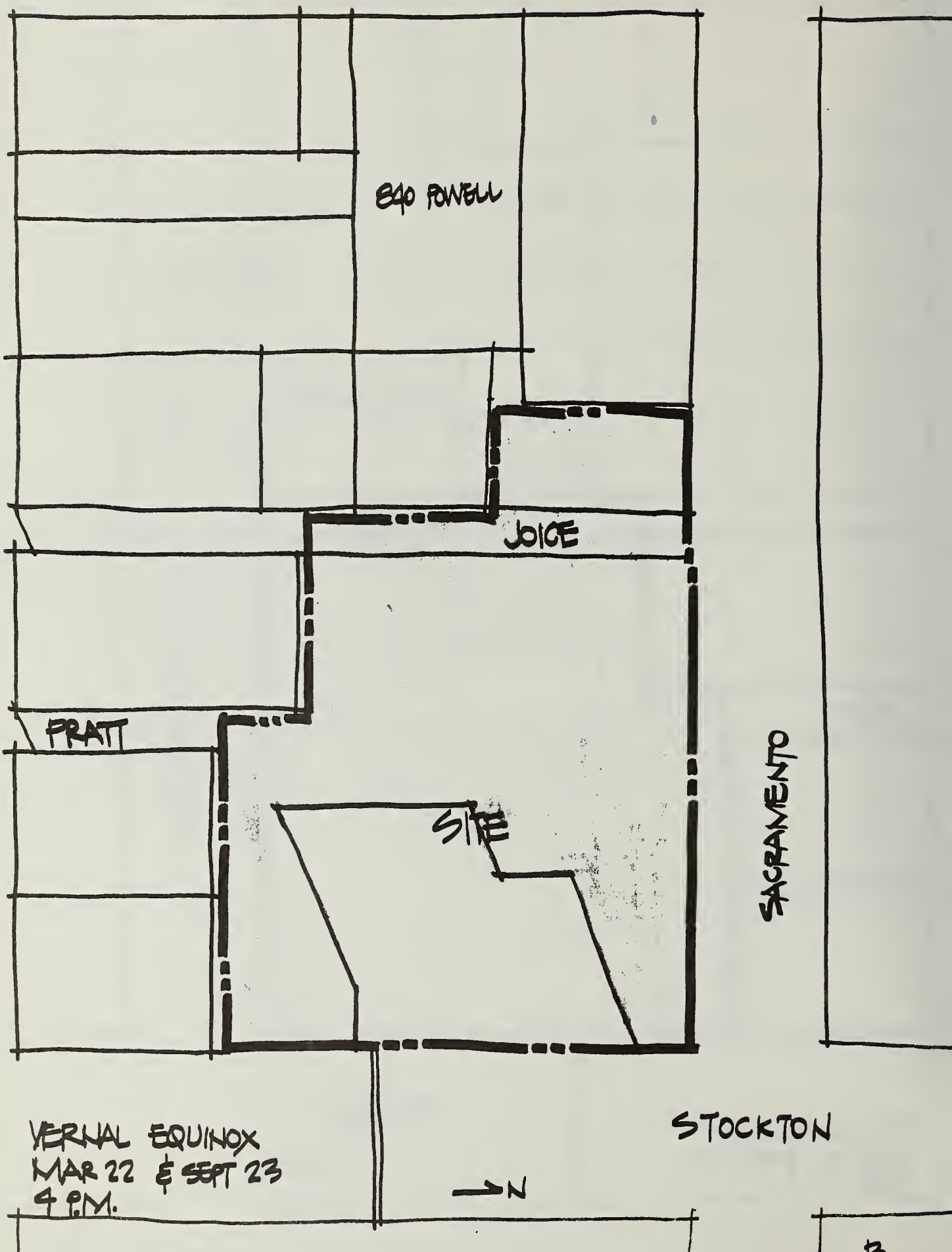
Tower at Different Locations (Including Family Unit Buildings)

H	Vernal Equinox	Mar. 22 and September 23	1 P.M.
I	Vernal Equinox	Mar. 22 and September 23	3 P.M.
J	Vernal Equinox	Mar. 22 and September 23	11 A.M.
K	Vernal Equinox	Mar. 22 and September 23	1 P.M.
L	Vernal Equinox	Mar. 22 and September 23	3 P.M.

Tower at Proposed Location (Including Family-Unit Buildings)

M	Vernal Equinox	Mar. 22 and September 23	2 P.M.
N	Summer Solstice	June 21	2 P.M.


840 POWELL
JAGE
PRATT
SITE
SACRAMENTO
STOCKTON
VERNAL EQUINOX
MAR 22 & SEPT 23
3 PM
N
A


840 POWELL
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SITE
SACRAMENTO
STOCKTON
VERNAL EQUINOX
MAR 22 & SEPT 23
4 P.M.
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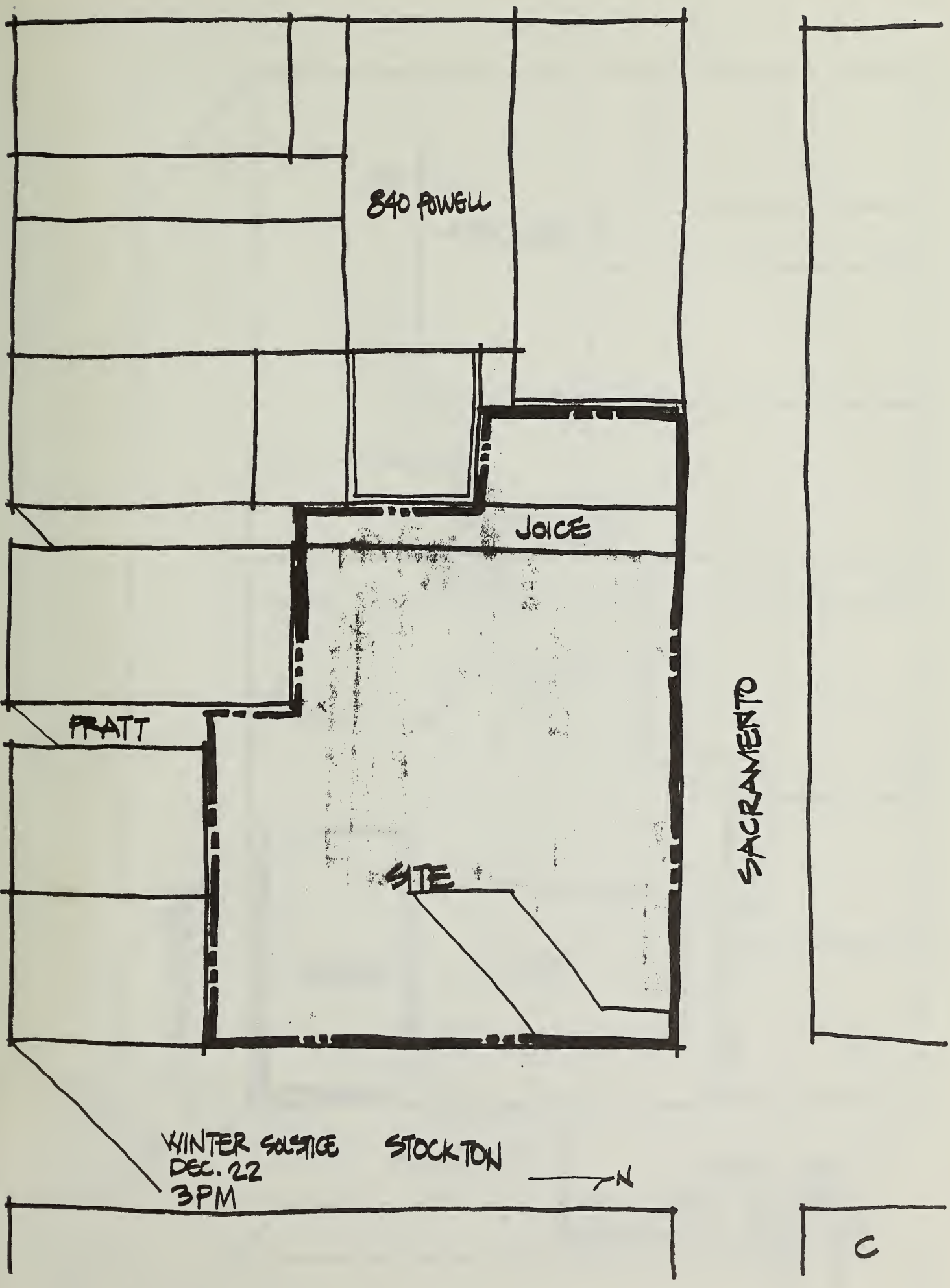
840 POWELL
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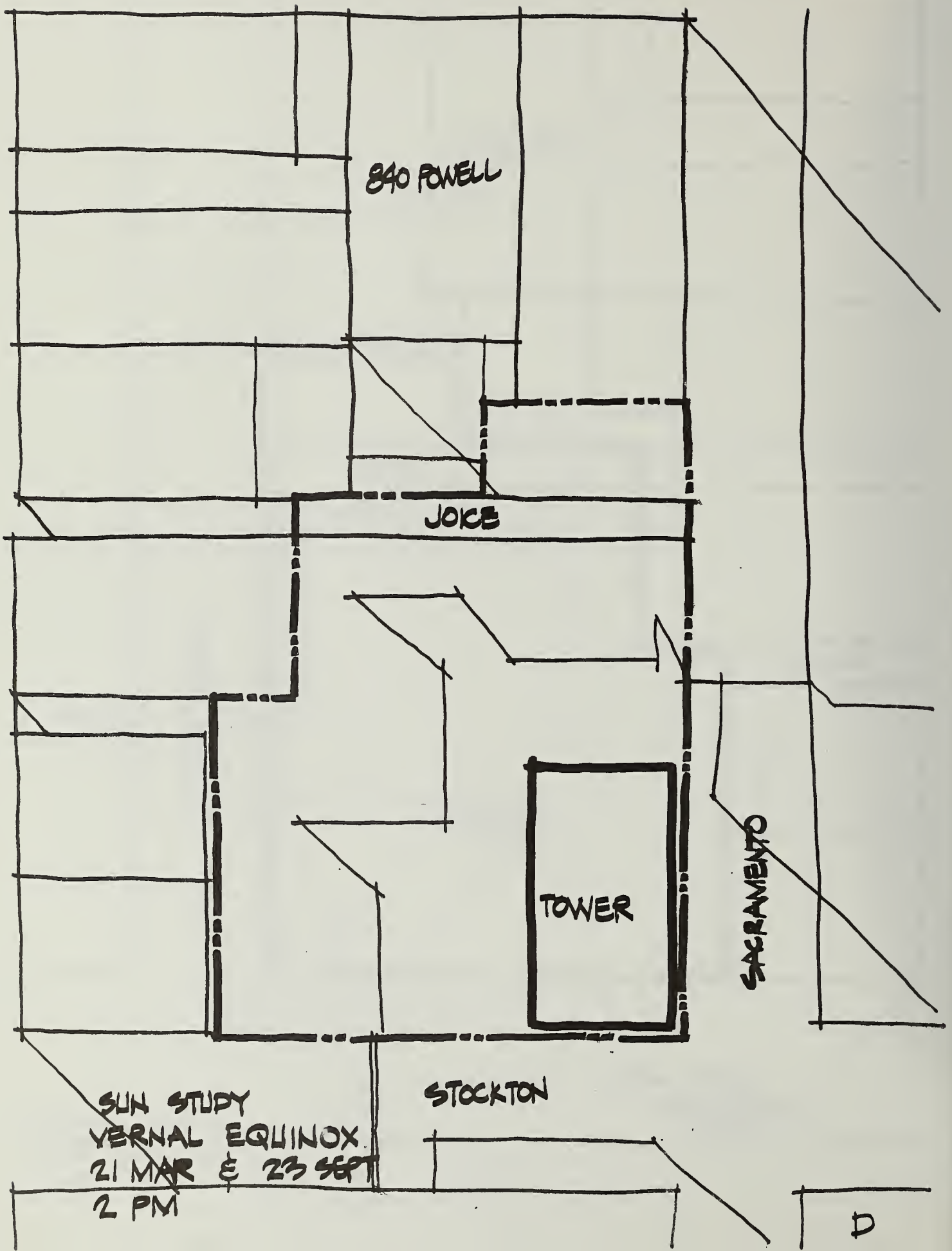
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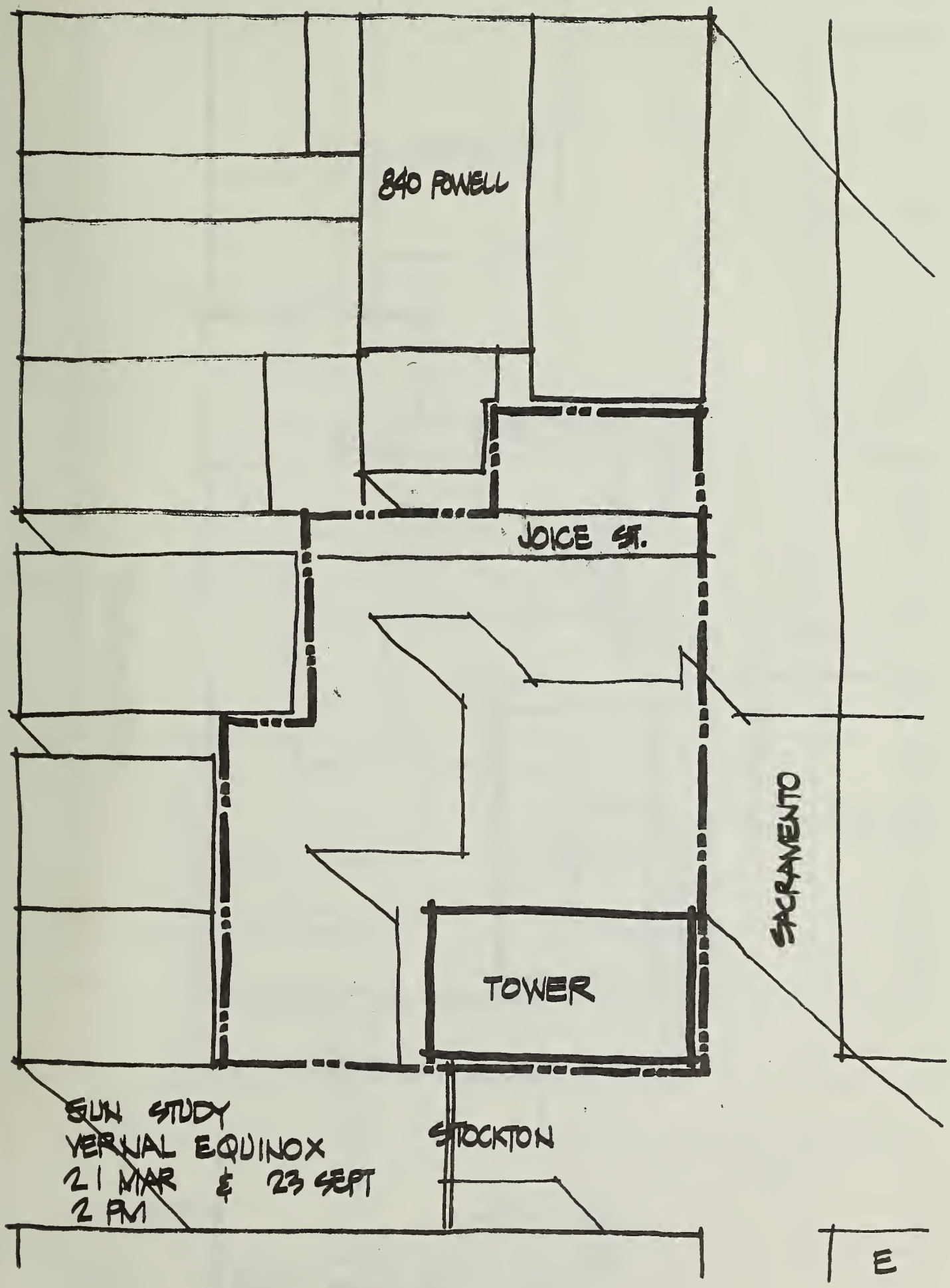
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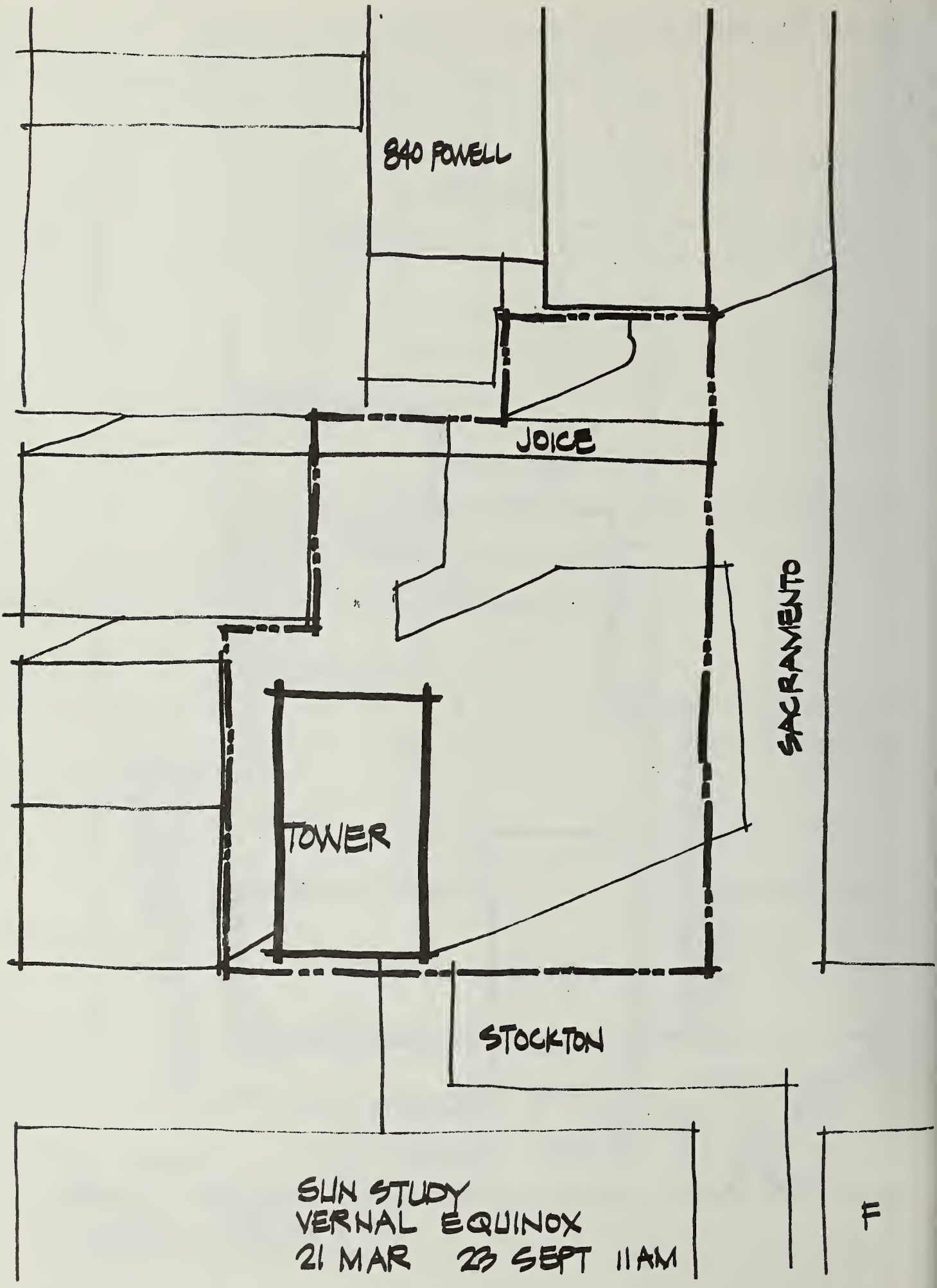
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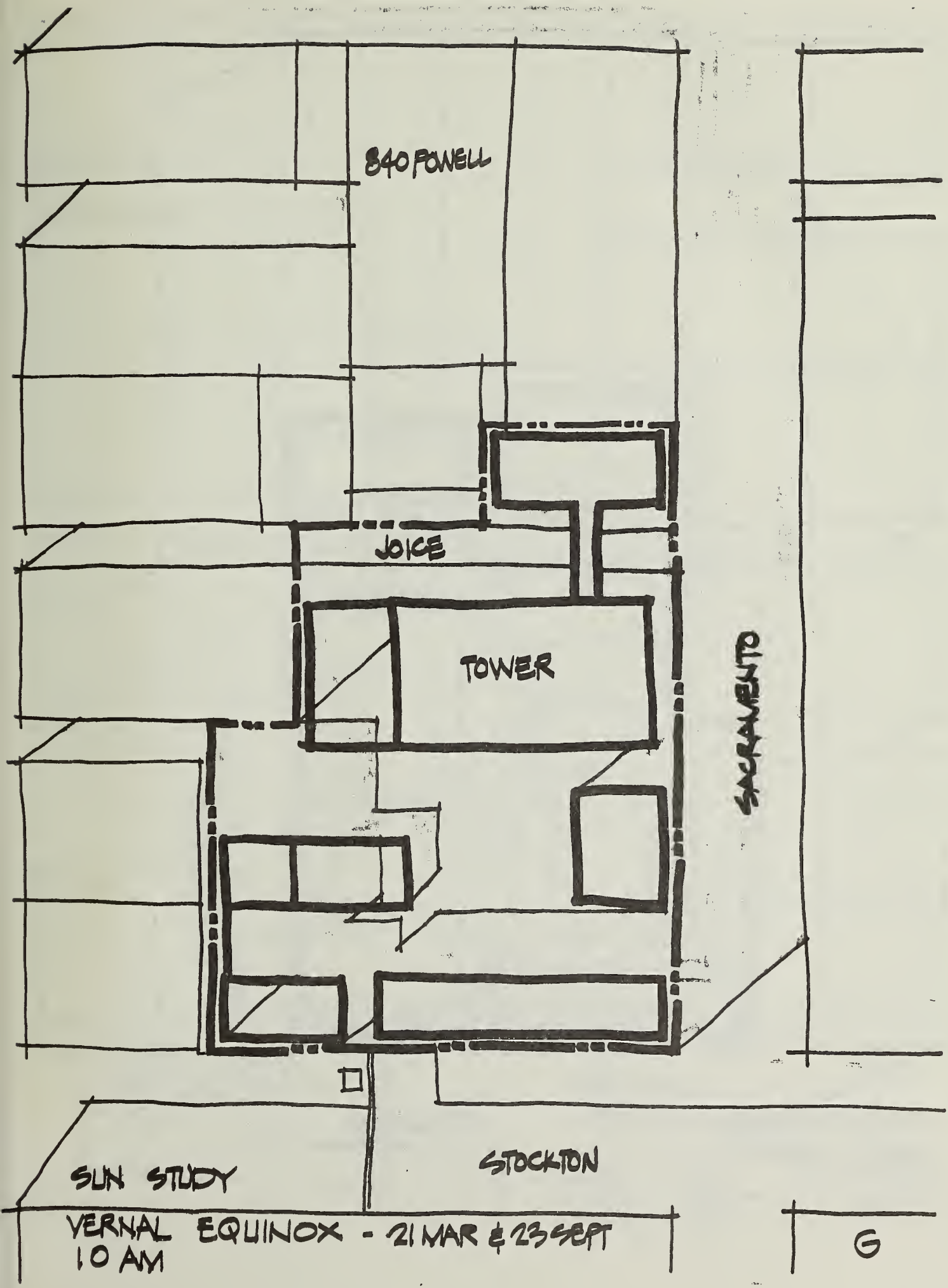
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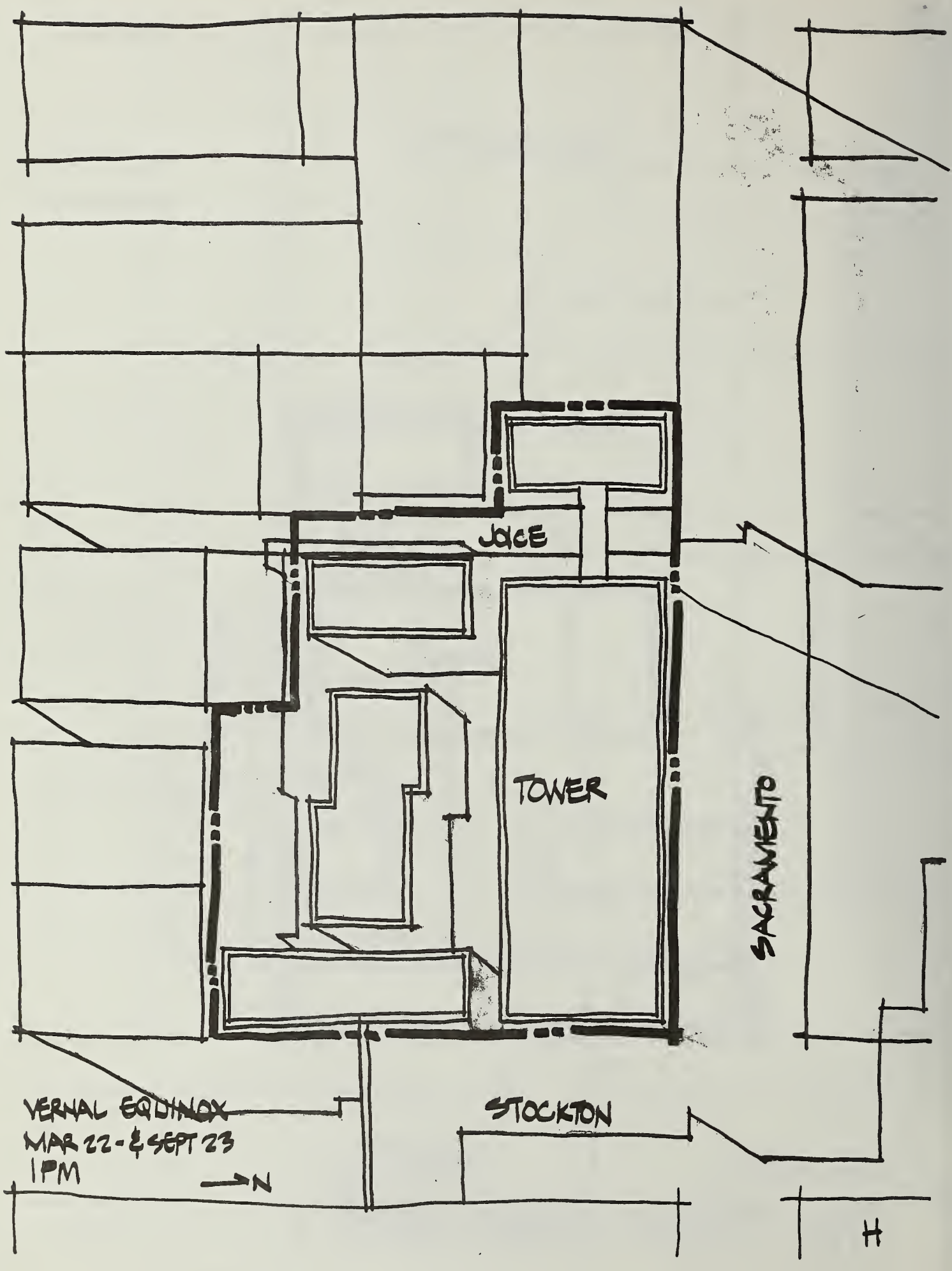
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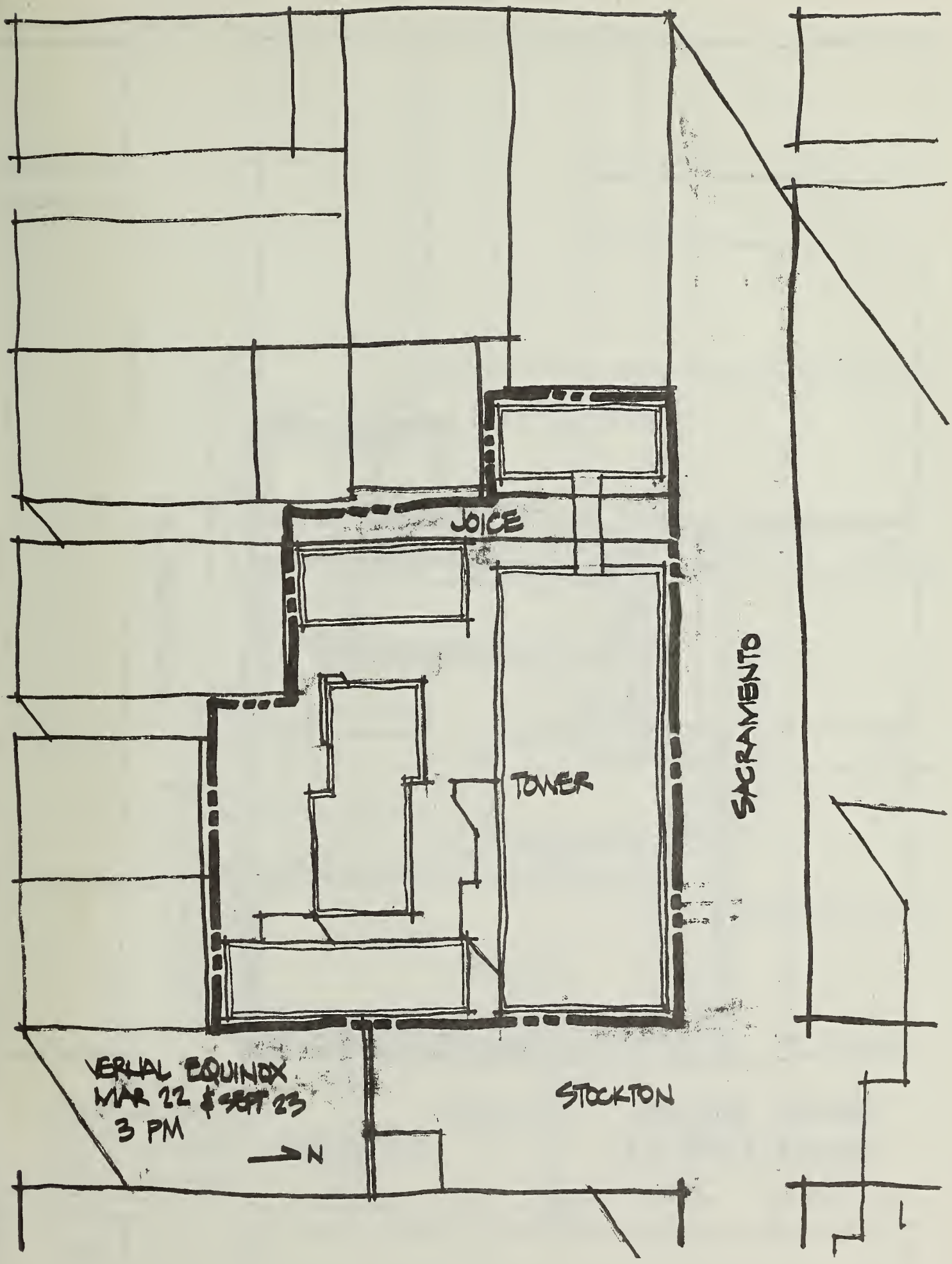
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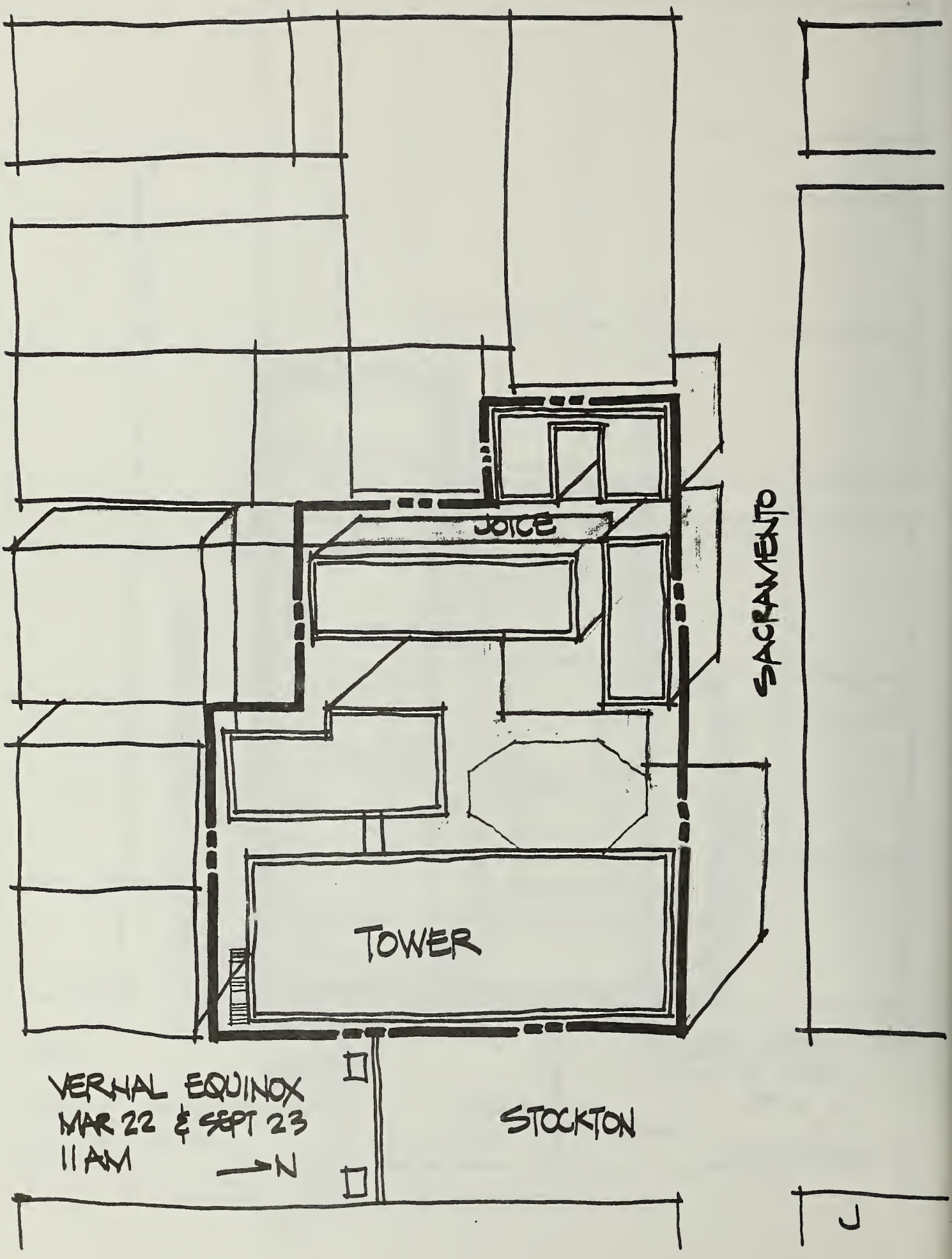
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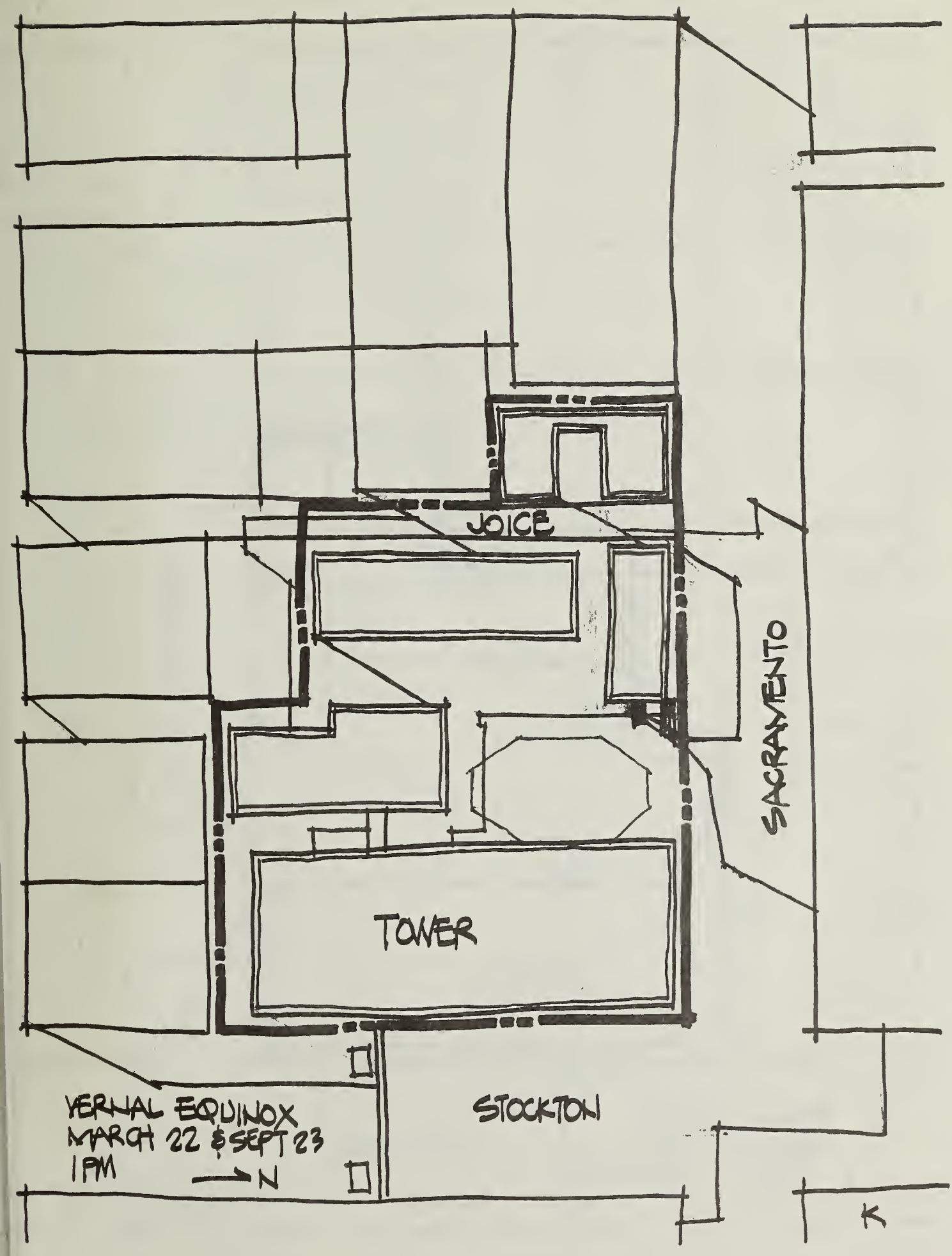
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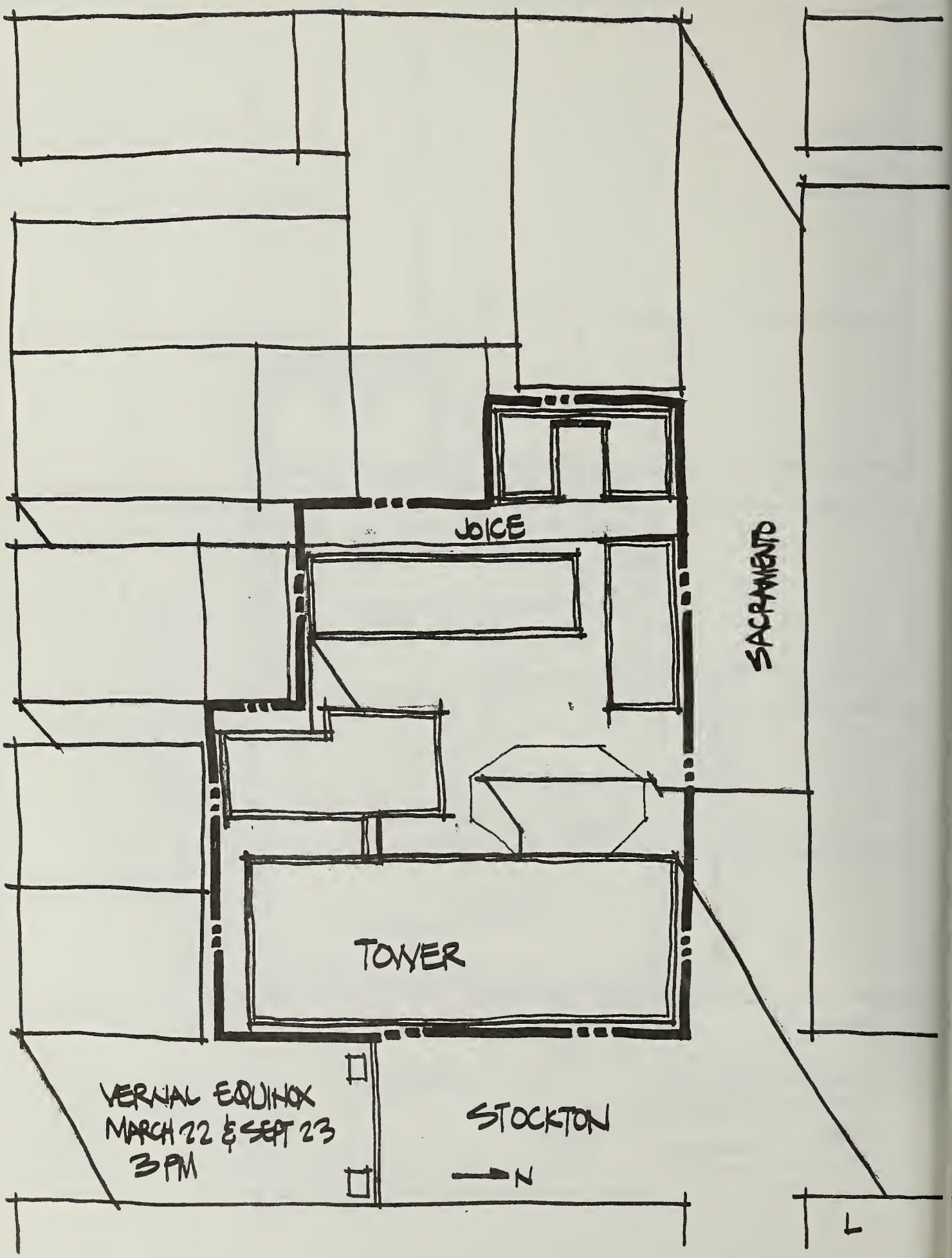
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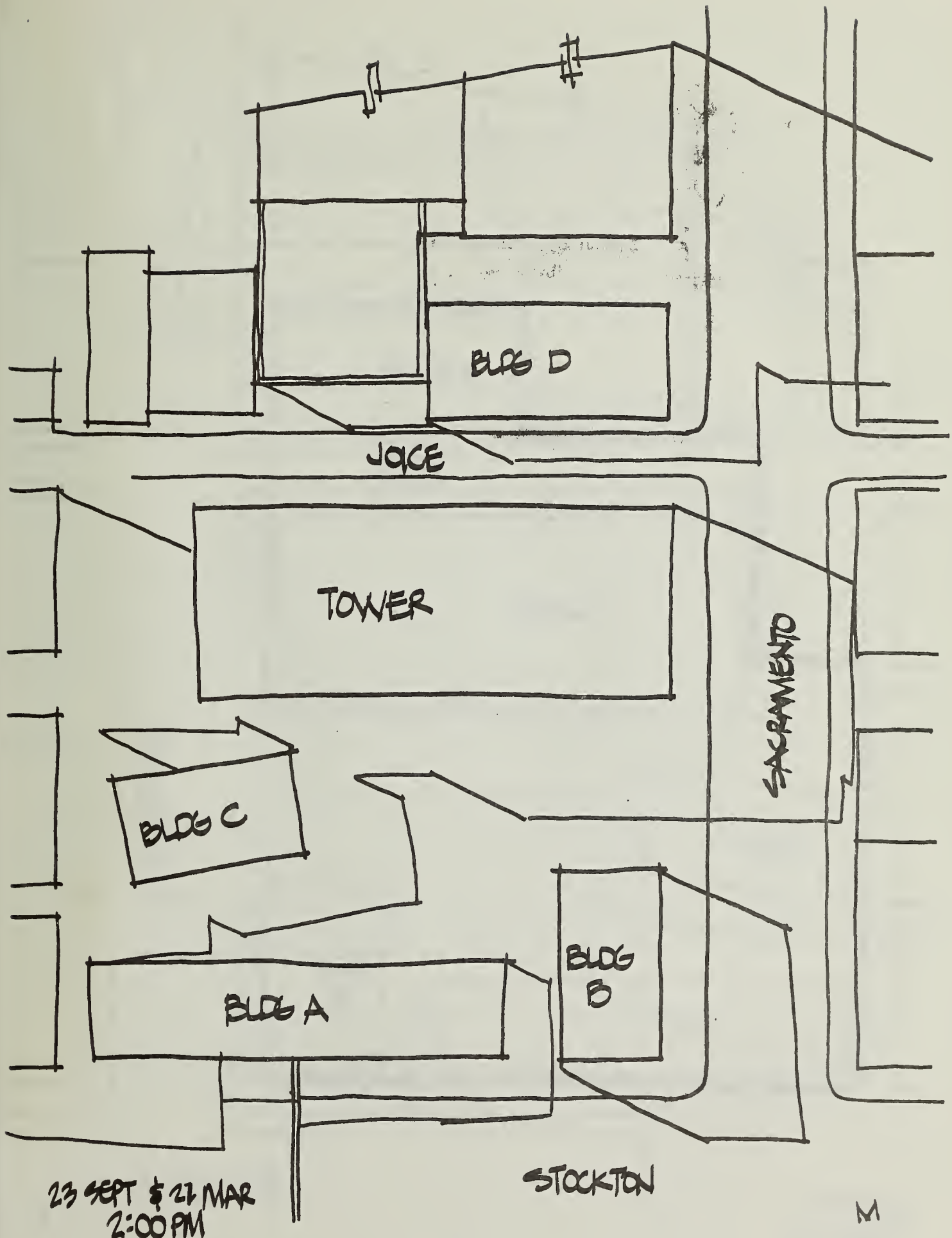
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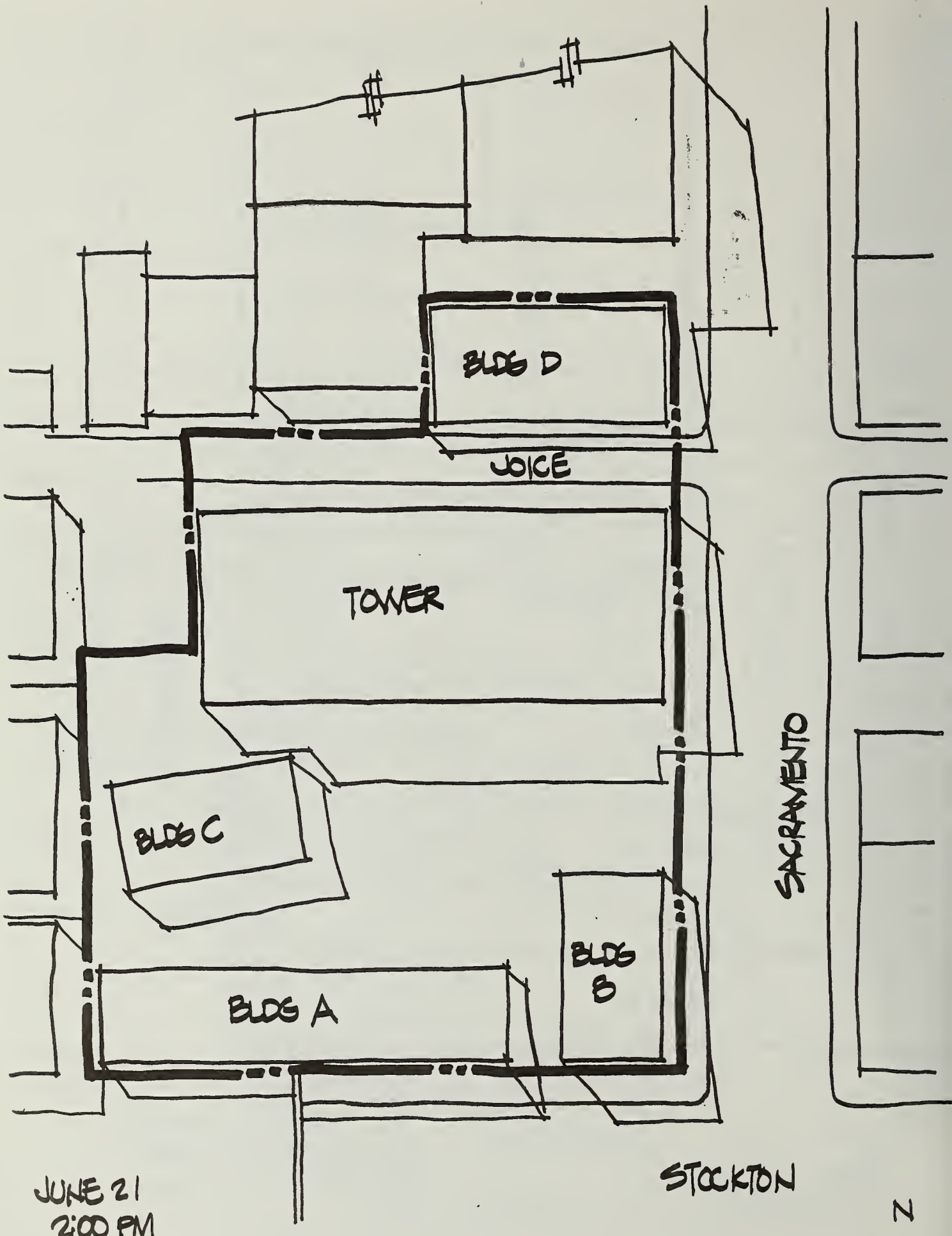
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PART IV

PROBABLE ADVERSE ENVIRONMENTAL IMPACTS WHICH CANNOT BE AVOIDED SHOULD THE PROPOSAL BE IMPLEMENTED

There are no major adverse impacts which cannot be avoided should the Project be implemented, however there will be several minor adverse impacts which cannot be avoided. One of these is the partial blocking of the views of approximately 19 nearby residential units. This is considered a minor adverse impact because the Project has been designed to minimize the blocking of these views to the Bay and the Project does not totally block any views.

In San Francisco, as well as in other areas of high density, newer buildings sometimes are constructed without regard to nearby property owners and a total blocking of views can result. That is not the case in with this Project.

Building D of the Project is adjacent to the uphill residential units and is a three-story family residential structure. It has been designed to its low level to reduce view blockages to the minimum. However, to comply with San Francisco's planning objective of higher structures towards the hilltop, the 13-story elderly residential tower is next on the uphill side. This compromise with the San Francisco planning objectives is viewed by HUD as an acceptable modification. However, it is noted that the compromise does deprive a number of Project units from views of the Bay had other building configurations been utilized to maximize Project view amenities. HUD feels the lose of views from Project units and the compromise to minimize nearby partial view blocking is an acceptable solution. The Project appears to provide a good balance between the City's planning objectives, partial view-blocking of certain nearby residential units, and restricting view amenities of Project residents.

Another minor adverse impact on the Project will result from the noise from Sacramento and Stockton Streets. HUD is requiring mitigating measures to assure an acceptable living environment in the Project.

Air pollution from vehicular traffic in the Project parking garage and from Sacramento and Stockton Streets are adverse impacts. HUD is requiring mitigating measures to assure the Project parking garage is properly ventilated and the Project is designed to maintain health standards in the Project.

The loss of existing open space prior to construction of the Project is minor. The continued maintenance of the area as open space and development as a park for recreational uses is unlikely due to the method of public bond financing and the topography of the site.

Possible slight adverse impacts may result from the Project due to the utilization of water, the production of garbage, the consumption of electrical power and natural gas and the slight increase in storm water run-off. With the exception of the water run-off, the other adverse impacts will reduce similar impacts from elsewhere in San Francisco. This is because most of the future residents of the Project are now residing in San Francisco and it is assumed they are consuming or producing somewhat similar amounts of power, water, garbage and other related residential by-products and consumptions.

PART V

RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The Project is a long-term operation to provide housing for a number of low income elderly persons and low income families. That is the long-term productivity of the Project. The short-term use of the environment by Project action is the construction stage of the Project.

The construction activities provide certain short-term positive and negative impacts. The positive impacts in the short-term are the employment, and purchase of materials, supplies, furniture and equipment.

The short-term negative impacts are the disruptions to traffic circulation due to construction activities, the noise of construction equipment and the dust caused by construction activities. These adverse impacts are minimized by compliance with San Francisco City ordinances.

The trade-off is between these short-term adverse impacts and the long-term provision of housing. HUD feels the short-term adverse impacts are minimal and has established procedures to assure compliance with mitigation measures. The long-term productivity is very beneficial in alleviating, to a degree, the human suffering from overcrowded and often over-priced housing for low income elderly persons and low income families. The balance is clearly in favor of the long-term productivity.

The long-term productivity of providing housing does close options for other uses of the site. These other uses are considered in the various alternatives considered for the Project. Again, on balance, HUD believes the provision of low income housing is the proper choice over the other alternatives. Considering the great need for such housing, HUD notes that it also serves to further the legislative mandate on the Department to assist in the provision of housing for low and moderate income individuals and families.

PART VI

IRREVERSIBLE AND IRRETREVIABLE COMMITMENTS OF RESOURCES WHICH WOULD BE INVOLVED

The Project land would be committed to the Project for long-term residential use and would not be retreviable until destruction of the structures or a change in use of the Project. Neither of these two possibilities are envisioned at this time.

Building materials necessary to construct the Project will be utilized and irreversibly committed. Potential salvage value after long-term utilization is not considered here.

The partial blockage of views from certain nearby residential units is a long-term irreversible amenity that is diluted. The construction of the Project will preclude modification of its blocking action.

Other minor environmental impactions for Project consideration relate predominately to the exiating adverse environmental elements and are not caused by the Project itself. These are principally the air and noise impactions from traffic on Sacramento and Market Streets. Infrastructure and service consumption factors are long-term and essentially irreversible. These are, however, transfers from other areas in San Francisco because the Project residents are now residing and consuming elsewhere in San Francisco.

There would be a minor long-term commitment of labor to maintain and service the Project. This is a beneficial commitment because of the current unemployment in San Francisco.

There would be a long-term commitment of Federal financial assistance to the Project. This could be as long as 40 years, the maximum term of a mortgage insured development. The exact amount of fund commitment cannot be ascertained until the Project is developed and occupied. This is because Section 236 assistance is to subsidize tenant rents down to an equivalent maximum of a one percent mortgage interest rate. In dollar figures, the estimated replacement cost (for mortgage insurance) of the Project is $6,194,130. The estimated annual Section 236 payments are $416,372. Some families and individuals may have such low incomes that they cannot afford to pay more than 25 percent of their income for rent. For these families and individuals, a rental assistance program is available from HUD and $58,582 is estimated as the annual amount of rental assistance that will be available for qualified Project residents.

There will be a long-term commitment of local services to the Project. These include, police, fire, health, welfare and educational services.

PART VII

RECOMMENDED ACTION ON THE PROPOSAL

After review and study of the various assessments and findings of this Draft Environmental Impact Statement, HUD believes that from an environmental point of view the proposed Project is tentatively acceptable. A final decision to approve by HUD will not be reached until after both the Draft and Final Environmental Impact Statements have been properly circulated and full consideration given to all of the views received. Any participation by HUD in providing mortgage insurance, Section 236 and rent supplementation payments will also be contingent upon satisfactory compliance of the requirements of these programs by the sponsor.

Appendix A. FEDERAL, STATE AND LOCAL AGENCIES FROM WHICH COMMENTS HAVE BEEN REQUESTED

Office of Architectural and Environmental Preservation
Advisory Council on Historic Preservation
1522 "K" Street, Suite 430
Washington, D. C. 20005

Office of the Secretary
Attention: Coordinator of Environmental Quality Activities
U. S. Department of Agriculture
Washington, D. C. 20550

Executive Director of Civil Works
Office of the Chief Engineer
U. S. Army Corps of Engineers
Washington, D. C. 20314

Office of the Deputy Assistant Secretary for Environmental Affairs
Department of Commerce
Washington, D. C. 20230

Paul DeFalco, Jr. (3)
Regional Administrator
Environmental Protection Agency
100 California Street
San Francisco, CA. 94111

Office of the Associate Director
Water Resources Council
2120 "L" Street, N. W., Suite 800
Washington, D. C. 20037

Small Business Administration
450 Golden Gate Avenue
San Francisco, CA. 94102

Director, Division of Environmental Affairs (5)
Energy Research and Development Administration
Washington, D. C. 20545

Commissioner's Advisory Council on Environmental Quality
Federal Power Commission
825 N. Capitol Street, N. E.
Washington, D. C. 20426

Regional Environmental Officer
Department HEW
50 Fulton Street
San Francisco, CA. 94102

Director, Office of Environmental Project Review (10)
Department of the Interior
Interior Building
Washington, D. C. 20240

Council on Environmental Quality (5)
Attn: Mrs. Kathy Penn
722 Jackson Place, N. W.
Washington, D. C. 20006

Director, Office of Economic Opportunity
1200 - 19th Street, N. W,
Washington, D. C. 20506

Secretarial Representative
Department of Transportation
450 Golden Gate Avenue
San Francisco, CA. 94102

Mr. J. E. Mullen
Director, Veterans Administration
211 Main Street
San Francisco, CA. 94105

Department of the Army
South Pacific Division, Corps of Engineers
211 Main Street
San Francisco, CA. 94105

Mr. Rod Kreger
Deputy Administrator
General Services Administration
Room 6137
Washington, D. C. 20405

Special Assistant to the Secretary
for Environmental Affairs
7819 New State
Department of State
Washington, D. C. 20520

Assistant Secretary for Environment and
Urban Systems
Department of Transportation
Washington, D. C. 20590

Mr. Richard L. Roudebush
Administrator, Veterans Administration
801 Vermont Avenue, N. W.
Washington, D. C. 20420

Mr. T. R. Lammers
District Director
Department of Transportation
Box 3366, Rincon Annex
San Francisco, CA. 94119

Mrs. Cecile Michael
President
League of Women Voters
12 Geary Blvd., Suite 605
San Francisco, CA. 94108

Honorable Quentin Kopp
President
San Francisco Board of Supervisors
City Hall
San Francisco, CA. 94102

Mr. Arthur Evans
Executive Director
San Francisco Redevelopment Agency
P. O. Box 646
San Francisco, CA. 94109

Department of Labor
Attention: Environmental
Officer
450 Golden Gate Avenue
San Francisco, CA. 94102

Mr. Ernest Slight, Director
Environmental Impact Division
Office of Environmental
Programs
Federal Energy Administration
New Post Office Building
12th & Pennsylvania Ave., N.W.
Washington, D. C. 20461

Federal Energy Administration
Attn: Environmental Officer
111 Pine Street
San Francisco, CA. 94101

Document Service
Environmental Law Institute
1346 Connecticut Ave., N. W.
Washington, D. C. 20036

Mr. John Jacobs, Executive
Director
San Francisco Planning and
Urban Renewal Association
126 Post Street
San Francisco, CA. 94108

Honorable George Moscone
Mayor
City of San Francisco
City Hall
San Francisco, CA. 94102

Mr. Edward I. Murphy
Acting Director
Department of City Planning
100 Larkin Street
San Francisco, CA. 94102

Mr. William Becker
Director
Human Rights Commission
1095 Market Street
San Francisco, CA. 94103

Bay Area Pollution Control District
939 Ellis Street
San Francisco, CA. 94109

S. Myron Tatarian, Director
Department of Public Works
City Hall
San Francisco, CA. 94102

Curtis Green, General Manager
San Francisco Municipal Railway
949 Presidio
San Francisco, CA. 94115

San Francisco Bay Chapter
Sierra Club
5608 College Avenue
Oakland, CA. 94618

Paul C. Soltow, Jr.
General Manager
Bay Area Sewage Services Agency (BASSA)
Hotel Claremont
Berkeley, CA. 94705

Mr. David O. Meeker, Jr. (2)
Assistant Secretary for CPD
Department of Housing and Urban Development
451 Seventh Street, S. W., Room 7100
Washington, D. C. 20410

Mr. Edward P. Joyce, Director of Emergency Services
6221 Geary Blvd.
San Francisco, CA. 94121

Mr. Keith Calden, Chief
San Francisco Fire Department
260 Golden Gate Avenue
San Francisco, CA. 94102

H. Welton Flynn, President
Public Utilities Commission
City Hall
San Francisco, CA. 94102

Office of the Lieutenant Governor (15)
Office of Intergovernmental Management
State Clearinghouse
1400 - 10th Street, Room 108
Sacramento, CA. 95814

William Mason, Project Director
Chinatown Redevelopment Project
San Francisco Redevelopment Agency
P. O. Box 646
San Francisco, CA. 94109

Eneas Kane, Executive Director
San Francisco Housing Authority
440 Turk Street
San Francisco, CA. 94102

Dr. Francis Curry, Director
Department of Public Health
101 Grove Street
San Francisco, CA. 94102

Honorable Robert J. Dolan
Clerk
San Francisco Board of Supervisors
235 City Hall
San Francisco, CA. 94102

Mr. Thomas Mellon
Chief Administrative Officer
City and County of San Francisco
City Hall
San Francisco, CA. 94102

Mr. Gordon Lau, President
San Francisco Planning Commission
City Hall
San Francisco, CA. 94102

Charles Gains, Chief
San Francisco Police Department
850 Bryant Street
San Francisco, CA. 94102

John Spring, General Manager
Recreation and Park Department
McLaren Lodge
Fell and Stanyan Streets
San Francisco, California 94117

Librarian
Chinatown Branch
San Francisco Public Library
1135 Powell Street
San Francisco, CA. 94108

Mr. James Jaquet, Director
Office of Community Development
City Hall
San Francisco, CA. 94102

Revan A. F. Tranter, Executive Director
Association of Bay Area Governments (ABAG)
Hotel Claremont
Berkeley, CA. 94705

Robert Alioto, Superintendent of Schools
135 Van Ness Avenue
San Francisco, CA. 94102

Paul Watt, Executive Director
Metropolitan Transportation Commission
Hotel Claremont
Berkeley, CA. 94705

Librarian
Government Documents Section
Main Library
Civic Center
San Francisco, CA. 94102

APPENDIX B

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The Section 236 Interest Supplement Program

The Section 236 Interest Supplement Program established by the Housing and Urban Development Act of 1968 was the Federal Government's major operating program to reduce costs on certain rental and cooperative housing projects designed for occupancy by low-income families. It was the logical "next" step for many public housing residents who were attempting upward mobility toward eventual home ownership which became available under the provisions of Section 235 of the same 1968 Housing and Urban Development Act. Although the Section 236 Interest Supplement Program is no longer available for new projects, the funds were reserved in 1974 under the contract reservation signed that year and will be available for Mei Lun Yuen.

Under this program, HUD makes monthly payments to mortgagees on behalf of mortgagors, of a part of the interest on market-rate mortgages financing rental or cooperative housing projects for lower income families. When the program was in effect, interest-reduction payments could also be made on rental or cooperative housing projects owned by private nonprofit, limited-dividend or cooperative entities which were financed under a state or local program providing assistance through loans, loan insurance, or tax abatement.

Interest-reduction payments cannot exceed the difference between the amount required for principal, interest, and mortgage insurance premium on a market-rate mortgage and the amount required for principal and interest on a mortgage at one percent interest. The purpose of the payments is to bring the monthly rental charges down to a level that low-income families can afford to pay with at least 25 percent of their adjusted monthly income.

The sponsors of mortgages insured by the Federal Housing Administration under this Section of the Act and for the interest-reduction payments may be nonprofit, limited dividend, or cooperative entities.

Tenants and cooperative occupants must meet specified income requirements and be composed of one of the following:

- Be a family.
- Two persons related by blood, marriage or operation of law.
- Single (at least 62 years of age.
- Handicapped persons (no age requirement)

Ten percent of the dwelling units may be for single people under 62 years of age. Priorities will be given to those prospective tenants displaced by urban renewal, government action or national disaster.

The tenants adjusted income cannot exceed the approved income limits for the area in which the project is located and for the size of family. Adjusted income for the Section 236 program is equal to the current income from all sources before taxes of all members of the family occupying the unit excluding a five percent deduction for unusual or temporary income, less $300 for each minor and less any earnings of each minor.

The tenants' adjusted income must be certified every year. Upon completion of the annual certification any needed adjustment in rental charges will be made.

It should be noted that during the initial rent-up period, over-income tenants are required to pay the fair market rental. After the initial rent-up period, however, the eligible tenant pays the basic rental or 25 percent of income - whichever is greater. Over-income tenants pay twenty-five percent of income but not in excess of the fair market rental.

The basic monthly rental charge is based on operation of the project at a one percent interest rate mortgage. HUD/FHA makes monthly assistance payments directly to the mortgagee to reduce the mortgage payments from market rate to an amount required for a one percent mortgage. Eligible tenants then pay the greater of the basic rental charge or 25 percent of adjusted income. The fair market rental for over-income tenants is based upon operation of the project at market interest rates.

The monthly rental charges may include all utilities except telephone. However, often the living units are individually metered and the tenants pays his own electric bill.

All sponsors must have an approved management program and realistic plan for providing socially-oriented management and related human services. The housing owner is expected to assist tenants in application preparation. The management has the fiscal responsibilities for monthly statements and the recertification of incomes each year. This management program and plan must be approved by FHA at least thirty days prior to initial endorsement.

Financing of Section 236 developments are generally by private lenders although nonprofit mortgagors are eligible for the Government National Mortgage Association (GNMA) Tandem Plan. In addition, state or local governments could obtain financing through loans, or under state or local programs of loan insurance or tax abatement.

Five or more units are eligible for the Section 236 program. These units may be detached (need not be contiguous), row, walk-up or elevator structures. The units - to be eligible for the program - must be new, or existing ones involving major rehabilitation. While the projects may include non-dwelling commercial space, they must be predominantly residential. The project must be designed so that the basic rent is less than 25 percent of maximum income limits.

The maximum term of the insured mortgage under this program is 40 years.

APPENDIX D

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
SAN FRANCISCO AREA OFFICE
ONE EMBARCADERO CENTER, SUITE 1600
SAN FRANCISCO, CALIFORNIA 94111

REGION IX
450 Golden Gate Avenue
P.O. Box 36003
San Francisco, California 94102

AUG 27 1976

IN REPLY REFER TO:
9.1SE

Mr. Herbert Rhodes
Attention: Gene Itogawa
State Historic Preservation Office
P. O. Box 2390
Sacramento, CA. 95814

Dear Mr. Rhodes:

This is to request your comments and concurrence in our finding that the Mei Lum Yuen project located at Sacramento and Stockton Streets in San Francisco, consisting of an elderly housing tower and single family units, will have no effect on the Donaldina Cameron House, a San Francisco Landmark which may be potentially eligible for the National Register of Historic Places.

Cameron House at 920 Sacramento Street is directly across from this proposed housing project.

For the convenience of review, we are attaching a copy of the project description, two site sketches, the draft of our Cultural Resources assessment and six snapshots of the Cameron House and project site.

In order that the project may proceed on schedule, we would appreciate your earliest possible reply.

Sincerely,

Tad Masaoka
Environmental Clearance Officer

Enclosures

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